OWNER'S GUIDE

DVD280

HIGH-PERFORMANCE
DVD/CD PLAYER

JBL®

read first! Important Safety Precautions!

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: To reduce the risk of electric shock,
do not remove cover (or back).
No user-serviceable parts inside.
Refer servicing to qualified service personnel.

CAUTION: To prevent electric shock,
do not use this (polarized) plug with
an extension cord, receptacle or other outlet
unless the blades can be fully inserted to
prevent blade exposure.

The lightning flash with arrowhead symbol,
within an equilateral triangle, is intended to
alert the user to the presence of uninsulated
"dangerous voltage" within the product's
enclosure that may be of sufficient magnitude to constitute
a risk of electric shock to persons.

The exclamation point within an equilateral
triangle is intended to alert the user to the
presence of important operating and
maintenance (servicing) instructions in the
literature accompanying the appliance.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Do not use attachments not recommended by the product manufacturer, as they may cause hazards.
16. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
17. If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.

18. An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits, as contact with them might be fatal.
19. Do not overload wall outlets, extension cords, or integral convenience receptacles, as this can result in a risk of fire or electric shock.
20. Never push objects of any kind into this product through openings, as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
21. The apparatus shall not be exposed to dripping or splashing, and no objects filled with liquids, such as vases, shall be placed on the apparatus.
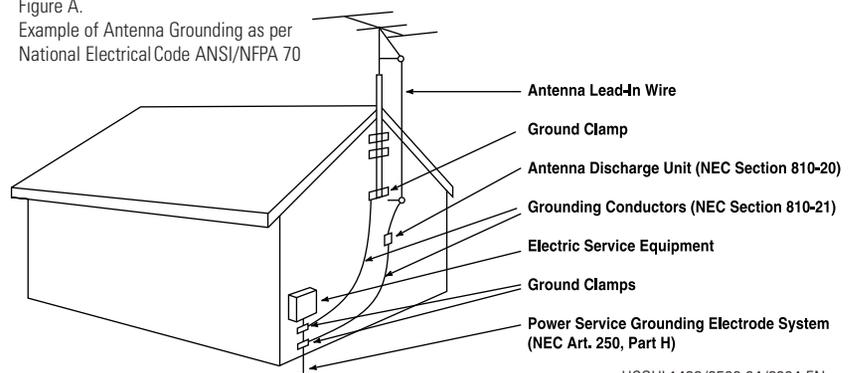**22.** Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
23. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
24. Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
25. The product should be mounted to a wall or ceiling only as recommended by the manufacturer.

Figure A.
Example of Antenna Grounding as per
National Electrical Code ANSI/NFPA 70

Antenna Lead-In Wire

Ground Clamp

Antenna Discharge Unit (NEC Section 810-20)

Grounding Conductors (NEC Section 810-21)

Electric Service Equipment

Ground Clamps

Power Service Grounding Electrode System
(NEC Art. 250, Part H)

DVD280 DVD/CD PLAYER

Typographical Conventions
In order to help you use this manual with the remote control, front-panel controls and rear-panel connections, certain conventions have been used.
EXAMPLE – (bold type) indicates a specific remote control or front-panel button or indicator, or rear-panel connection jack.
EXAMPLE – (OCR type) indicates a message that is visible on the front-panel information display or screen.
1 – (number in a square) indicates a specific front-panel control.
❶ – (number in an oval) indicates a button or indicator on the remote control.
① – (number in a circle) indicates a rear-panel connection.
Ⓐ – (letter in a square) indicates an indicator in the front-panel information display.
Ⓐ – (letter in a circle) indicates a type of cable connection between the DVD player and another component.

INTRODUCTION

Thank you for choosing the JBL® DVD280, a multipurpose DVD player that delivers the highest level of playback quality from a wide range of optical media formats. Along with conventional DVD-Video and CD audio discs, the DVD280 is also compatible with CD-R and CD-RW discs, VCD discs and discs recorded with audio files in the Windows Media® (WMA) and MP3 formats. The DVD280 is also capable of displaying a "slide show" of still images in the JPEG format, which may be combined with MP3 or WMA audio files for a multimedia presentation.

The DVD280 offers video playback of the highest possible quality, thanks to state-of-the-art pixel-by-pixel processing, and progressive scan video outputs for use with digital "HDTV-Ready" display monitors. Using a high-speed, digital processor, the DVD280 is capable of reconstructing the 3/2 pulldown effect introduced when film-based programs are transferred to video. In conjunction with precision video output DACs, the end result is a full 60-frame-per-second image that is the closest thing to film this side of your local cinema. Of course, conventional Y/Pr/Pb component video, S-video and composite video outputs are also available for use with analog televisions and video projectors.

In keeping with our tradition as a leader in audio technology, JBL has packed the DVD280 with the latest features, including audiophile-grade audio output DACs and full compatibility with 96kHz audio programming. Both coaxial and optical digital outputs are available for direct connection to A/V receivers or surround processors so that you may take advantage of Dolby* Digital and DTS® soundtracks. Built-in MP3 and WMA decoding allows music discs created and finalized on a computer to be played back through your home theater system for increased listening pleasure.

When playing DVDs, easy-to-understand on-screen menus and icons make it simple to change languages, soundtracks, subtitles or aspect ratio, while a parental-lock function enables you to control which discs may be viewed by younger members of the household.

DVD players are among the fastest growing consumer electronics products ever brought to market, so this may be the first DVD player you've owned. Although many of the features of the DVD280 resemble those of standard CD changers or players, there are a number of functions that you may be unfamiliar with. To ensure that you are able to take advantage of all the power and flexibility the DVD280 has to offer, we encourage you to review this manual. That small investment of your time will pay major dividends in the enjoyment you will get from proper use of the DVD280.

If you have additional questions about this product, or its installation or operation, that are not answered in this manual, please contact your dealer, as he or she is your best source of local information. You may also contact JBL via e-mail through our Web site at www.jbl.com.

NOTE: This player is designed and manufactured for compatibility with Region Management Information that is encoded on most DVD discs. This Region Code is usually displayed on the DVD case and the disc. This player has been configured by the factory for playback of discs containing the Region Code for your area of the world, which is indicated on the carton and the rear panel of the unit, and for discs that do not contain Region Code information. If there is any other Region Code on a disc, it will not play on the DVD280, and an error message will appear on-screen. Consult with your local JBL dealer or distributor if you have any questions regarding the Region Code setting of this player.

IMPORTANT NOTE: Consumers should note that not all high-definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. In case of 525 or 625 progressive scan picture problems, it is recommended that the user switch the connection to the "standard definition" output. If there are questions regarding our TV set compatibility with this model 525p and 625p DVD player, please contact our customer service center.

- Plays a Wide Range of Video and Audio Formats, Including DVD-Movie Discs, VCD, Standard CD Audio Discs, CD-R/RW Audio Discs, WMA Discs and MP3 Discs
- High-Quality Video Playback Utilizing 10-Bit DACs, Progressive Scan and Component Video Outputs
- Dolby* Digital and DTS® Data Signal Output Through Both Optical and Coaxial Digital Audio Connections
- Audiophile-Grade Output DACs for the Finest Audio Reproduction
- Easy-to-Use On-Screen Menu System
- Playback of Data Discs Containing MP3 Audio Files, Windows Media® WMA Audio Files and JPEG Still-Image Files
- Extensive Programming Capability for Audio and Video Discs
- Parental Lock Controls Prevent Unauthorized Viewing of Restricted Movies
- Multiple Options for Language, Soundtrack and Subtitle Selection
- Multiple-Angle Capabilities With Specially Encoded DVD Discs
- Backlit, Ergonomically Designed Remote Control

SAFETY INFORMATION

Verify Line Voltage Before Use
Your DVD280 has been designed for use with 230-volt AC current and the plugs are specifically designed for 230-volt applications. Connection to a line voltage other than that for which it is intended can create a safety and fire hazard and may damage the unit.

Depending on the electrical requirements in your area or the wiring in your home, the power cords included with your DVD280 may not be the correct ones, and you may need to contact your local JBL distributor to obtain the correct power cord.

If you have any questions about the voltage requirements for your specific model, or about the line voltage in your area, contact your selling dealer before plugging the unit into a wall outlet.

Do Not Use Extension Cords
We do not recommend that extension cords be used with this product. As with all electrical devices, do not run power cords under rugs or carpets or place heavy objects on them. Damaged power cords should be replaced immediately by an authorized service center with cords meeting factory specifications.

Handle the AC Power Cord Gently
When disconnecting the power cord from an AC outlet, always pull the plug; never pull the cord. If you do not intend to use the unit for any considerable length of time, disconnect the plug from the AC outlet.

Do Not Open the Cabinet
There are no user-serviceable components inside this product. Opening the cabinet may present a shock hazard, and any modification to the product will void your guarantee. If water or any metal object such as a paper clip, wire or a staple accidentally falls inside the unit, disconnect it from the AC power source immediately, and consult an authorized service center.

Installation Location
■ To ensure proper operation, and to avoid the potential for safety hazards, place the unit on a firm and level surface. When placing the unit on a shelf, be certain that the shelf and any mounting hardware can support the weight of the product.

■ Make certain that proper space is provided both above and below the unit for ventilation. If this product will be installed in a cabinet or other enclosed area, make certain that there is sufficient air movement within the cabinet.

■ Do not place the unit directly on a carpeted surface.

■ Avoid moist or humid locations.

■ Avoid installation in extremely hot or cold locations, or an area that is exposed to direct sunlight or heating equipment.

■ Do not obstruct the ventilation slots on the sides of the unit, or place objects directly over them.

Cleaning
When the unit gets dirty, wipe it with a clean, soft, dry cloth. If necessary, and only after unplugging the AC power cord, wipe the unit with a soft cloth dampened with mild soapy water, then a fresh cloth with clean water. Wipe immediately with a dry cloth. NEVER use benzene, aerosol cleaners, thinner, alcohol or any volatile cleaning agent. Do not use abrasive cleaners, as they may damage the finish of metal parts. Avoid spraying insecticide near the unit.

Unpacking
The carton and shipping materials used to protect your new DVD player during shipment were specially designed to cushion it from shock and vibration. We suggest that you save the carton and packing materials for use in shipping if you move, or should the unit ever need repair.

To minimize the size of the carton in storage, you may wish to flatten it. This is done by carefully slitting the tape seams on the bottom, and collapsing the carton down to a more two-dimensional appearance. Other cardboard inserts may be stored in the same manner. Packing materials that cannot be collapsed should be saved along with the carton in a plastic bag.

If you do not wish to save the packaging materials, please note that the carton and other sections of the shipping protection are recyclable. Please respect the environment and discard those materials at a local recycling center.

Remove Front-Panel Protective Film
In order to protect the lens covering the front panel of your new DVD280, it is shipped from the factory covered by a protective plastic film. Before using the unit, remove this film by grabbing one corner and gently peeling back the plastic sheet. Note that the film must be removed for proper operation of the remote control.

Moving the Unit
Before moving the unit, be certain to disconnect any interconnection cords with other components, and make certain that you disconnect the unit from the AC outlet.

IMPORTANT NOTE: To avoid damage to the DVD280 that may not be covered by the warranty, be certain that the disc is removed from the unit before it is moved. Once the DVD280 is installed, a disc may be left in the unit when it is turned off, but the unit should NEVER be moved with a disc left in the disc tray.

Important Information for the User
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. The limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio-frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that harmful interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

■ Reorient or relocate the receiving antenna.
■ Increase the separation between the equipment and receiver.
■ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
■ Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept interference received, including interference that may cause undesired operation.

NOTE: Changes or modifications may cause this unit to fail to comply with Part 15 of the FCC Rules and may void the user's authority to operate the equipment.

CAUTION: The DVD280 uses a laser system. To prevent direct exposure to the laser beam, do not open the cabinet enclosure or defeat any of the safety mechanisms provided for your protection. DO NOT STARE INTO THE LASER BEAM. To ensure proper use of this product, please read this owner's manual carefully and retain it for future use. Should the unit require maintenance or repair, please contact your local JBL service center. Refer servicing to qualified personnel only.

FEATURES & DVD COMPATIBILITY

High-Quality Video

• Advanced pixel-by-pixel processing using 10-bit MPEG-2 video decoding circuits.

• Test-screen signal for testing video performance and setup.

• Compatibility with dual-layer, extended-play DVDs.

• Playback of JPEG image files.

• Progressive Scan component video outputs.

High-Quality Digital Audio

• By connecting a digital processor or receiver, you may enjoy high-quality 5.1 digital surround sound from DTS or Dolby Digital discs.

• With linear PCM audio at 16–24 bits and 44kHz – 96kHz (also on digital output, see table on page 21), audio quality exceeding that of CD becomes possible.

• Optical and coaxial digital audio outputs.

Many Convenient Features

• Intuitive on-screen menu systems for disc or player information and programming many major functions.

• Subtitles may be displayed in one of numerous languages (DVD only)†.

• The multi-angle function allows you to choose the viewing angle of scenes that were shot from a number of different angles (limited to DVDs recorded with multiple camera angles).

• Multiple options for dialogue language and soundtrack selection (limited to DVDs recorded with multiple dialogue languages or soundtracks).

• Parental lock settings to prevent play of discs unsuitable for some audiences (DVD only).

• Separate buttons for convenient Fast Forward/Fast Reverse Search and Track Skip.

• Zoom during Play and Pause (DVD, VCD and SVCD only).

• Backlit, ergonomically designed remote control.

• Future software upgrades accessible via the Internet.

† The number of languages depends on the information available on each individual DVD.

Compatible With CD as Well as DVD

• The DVD280 will play any conventional Audio CD (CD-A) and most recordable (CD-R) or erasable (CD-RW) CDs, bearing the logos shown here; data discs containing MP3, WMA or JPEG files; or any VCD or DVD-Video disc with the Region Code indicated on the rear panel of the unit.

Disc Formats Supported by This Player

The unit can play the following types of discs:

DVD	CD
8cm (3")	8cm (3")
12cm (5")	12cm (5")

The DVD280 will also play most DVD-R, DVD-RW, DVD+R or DVD+RW discs recorded in the DVD-Video format, but we cannot guarantee complete playback compatibility of DVD-recordable discs, due to the wide variation in recorders and blank discs.

CD-RW	CD-R	VCD or SVCD
12cm (5")	8cm (3")	8cm (3")
	12cm (5")	12cm (5")

NOTE: Playback of CD-R or CD-RW discs created on a computer requires proper formatting and finalization of the disc for audio playback. Some computers and/or software programs may not be capable of creating compatible discs.

DVD-Video Disc Compatibility:

• 8cm (3") or 12cm (5") discs
• Single-sided or double-sided discs
• Single-layer or dual-layer discs
• Dolby Digital, DTS, MPEG or Linear PCM digital audio tracks
• MPEG-2 digital video
• Discs are generally divided into one or more titles, which may be further subdivided into chapters.

Audio CD Compatibility

• 8cm (3") or 12cm (5") discs
• Linear PCM digital audio
• Audio CDs are divided into tracks

CD-R/RW Compatibility

• 12cm (5") discs
• Linear PCM, MP3 (32kbps – 320kbps) or Windows Media® WMA (16kbps – 192kbps) digital audio
• May contain JPEG still images (up to 5 megapixels, file size up to 5Mb)
• Linear PCM discs are generally divided into tracks like an audio CD. MP3, WMA and JPEG discs (or discs that contain more than one of these formats) are divided into files, which may be organized into folders, depending on how the disc was created.

VCD/SVCD Compatibility

• 12cm (5") discs
• Linear PCM, MP1 (MPEG-1, Layer 1), MP3 (MPEG-1, Layer 3) digital audio
• MPEG-1 digital video
• May contain JPEG still images (Video CD Version 2.0).
• Some discs may contain menus and chapters, while other discs simply contain tracks. Version 2.0 discs may offer interactive playback control (PBC).

However, the DVD280 will NOT play the following:

• DVD-Audio discs, unless the disc contains Dolby Digital, DTS, MPEG or Linear PCM digital audio tracks
• DVD-Video discs with a Region Code other than that indicated on the rear panel
• DVD-ROM data discs
• DVD-RAM discs
• CD-I discs
• CD-G discs
• Kodak® Photo CD discs

NOTE: Due to differences in the formatting of certain discs, it is possible that some discs may include features that are not compatible with the DVD280. Similarly, although the DVD280 is capable of a wide range of features, not all discs include every capability of the DVD system. For example, although the DVD280 is compatible with multi-angle discs, that feature is only possible when the disc is specially encoded for multiple-angle play. In addition, the DVD280 is capable of playing back both Dolby Digital and DTS soundtracks, but the number and types of tracks available will vary from disc to disc. To make certain that a specific feature or soundtrack option is available, please check the options noted on the disc jacket.

• Playback of DTS audio discs requires connection to a processor or receiver with a DTS decoder and the correct setting of the Digital Output Format in the Audio Sub-menu to "Original" (see page 25).

• Playback capability for CD- or DVD-recordable discs may vary due to variations in the quality of the disc and the recorder used to create the disc.

• The DVD280 is compatible with most discs recorded with files encoded using MP3 or Windows Media 9, as well as JPEG still images. However, note that variations in the encoder or codec used and the bit rate of the encoding may affect the DVD280's ability to play back a specific disc. As a result, we cannot guarantee complete compatibility with all encoders and versions of the codecs. For best results, we recommend that MP3 files be encoded at bit rates ranging between 32kbps and 320kbps. WMA files should be encoded at bit rates between 16kbps and 192kbps. JPEG files should contain no more than 5 megapixels, and the file size should be no larger than 5Mb.

Upgradeability via Internet

The "firmware" controlling the functionality of the JBL DVD280 is fully upgradeable. In the event of future improvements to its operations and features, it will be possible to download firmware upgrades from www.jbl.com. Simply copy the downloaded file onto a CD-R, and insert it into the DVD280 for an automatic upgrade.

Packing List

1 JBL DVD280 DVD Player

1 Remote control

2 AA batteries

1 A/V cable for stereo analog audio and composite video

1 S-video cable

1 1/8" Remote input/output cable

3 AC power cords. Use the one appropriate for your region and electrical requirements. If none is correct for your area, you may need to contact your local JBL distributor to obtain the correct power cord.

1 Owner's manual

TERMINOLOGY

Since they share some of the characteristics and technology of CD players, many of the terms and operational concepts used in a DVD player are similar to what you may be familiar with from CD players and changers, or older video disc formats such as Laser Disc. However, if this is your first DVD product, some of the terms used to describe the features of a DVD player may be unfamiliar. The following explanations should solve some of the mysteries of DVD, and help you to enjoy all the power and flexibility of the DVD format and the DVD280.

Aspect Ratio: This is a description of the width of a video image in relation to its height. A conventional video screen is four units wide for every three units of height, making it almost square. Newer wide-aspect-ratio video displays are 16 units wide for every nine units of height, making them more like the screen in a movie theater. The program material on a DVD may be recorded in either format and, in addition, you may configure the DVD280 to play back in either format, depending on the features recorded on a disc.

Chapter: DVD programs are divided into chapters and titles. Chapters are the subsections programmed into a single title on a disc. Chapters may be compared to the individual tracks on an audio CD. Press the **Menu Button ㉙** to see a listing of the chapters on a disc.

Component Video: This form of video signal eliminates many of the artifacts of traditional composite video signals by splitting the signal into a separate luminance channel (the Y signal channel) and two color-difference signals (the Pr and Pb signal channels). With a component video connection, you will see greater picture resolution and eliminate many picture imperfections, such as the moiré patterns often seen on check-patterned cloth. However, in order to benefit from component video, you must have a video display with Y/Pr/Pb component video inputs. Do not connect the component video outputs of the DVD280 to the standard composite or S-video inputs of a TV or recorder.

JPEG Files: JPEG stands for the Joint Photographic Experts Group, which developed a standard for compressing still images, such as photographs. JPEG files may be created on a personal computer by importing images from a digital camera, or scanning printed photographs. These files may be burned onto a compact disc. The DVD280 is among the few DVD players that are capable of recognizing JPEG files and enabling you to view them on your video screen. Moreover, when WMA or MP3 audio files are stored on the same disc as the JPEG files, you may create a "slide show" of images with music in the background. See page 34 for more information.

MP3 Files: MP3 is an audio compression format that was developed by the Motion Picture Experts Group as an adjunct to the MPEG-1 video compression format. A number of encoding software programs are available for transferring CDs and other audio programs into the MP3 format. The main benefit of MP3 is that it reduces the size of audio files considerably, depending on the amount of compression selected during the encoding process, enabling you to store many more songs on one compact disc than in the standard audio CD format. The DVD280 is capable of playing MP3 files and displaying the file names, using its advanced graphic interface. See page 40 for more information on MP3 files.

Multiple Angle: DVDs have the capability to show up to four different views of the same scene in a program. When a disc is encoded with multiple-angle information, pressing the **Angle Button ㉓** will enable you to switch between these different views. Note that, at present, few discs take advantage of this capability and, when they do, the multiple-angle technology may only be present for short periods of time within the disc. Producers will usually insert some sort of icon or graphic in the picture to alert you to the availability of multiple-angle scenes.

Progressive Scan: The DVD280 offers progressive scan video outputs for use with compatible high-resolution televisions and projectors. Before DVD, no consumer medium could store, transmit or display video with full resolution. To conserve bandwidth, analog compression (interlacing) is employed: first, the odd-numbered lines of a frame are displayed, followed by the even-numbered lines. The result is that only half of the video image is drawn at one time; the viewer's brain must reassemble the complete image. This is acceptable, if the monitor is not too large and if there is not too much motion in the image. Large displays and fast-moving images reveal the limitations of this system. Thanks to DVD's immense data capacity, images are now stored intact (progressively), so that all the lines in each frame (odd and even) are shown at the same time. But because most TVs cannot handle a progressive signal, all current DVD players generate an interlaced output for compatibility. The DVD280 is among the select few DVD players with true progressive scan video output for use with compatible TVs and CRT projectors and with all plasma, LCD and DLP display devices, via the component video output. The result is 40% greater light output than a conventional TV and a stunningly detailed high-definition image, along with an almost complete absence of visible scanlines and motion artifacts. The DVD280's sophisticated pixel-by-pixel processing is a major advancement over the previous generation's line-by-line processing, bringing out even greater detail in your favorite video presentations. Of course, traditional Y/Pr/Pb component video, S-video and composite video outputs are included for use with conventional televisions and projectors.

Reading: This is a message that you will see when you first press the **Play Button 6 12**. It refers to the fact that the player must first examine the contents of the disc to see whether it is a CD or DVD, and then extract the information about the type of material on the disc, such as languages, aspect ratios, subtitles, number of titles and more. The slight delay while the contents of the disc are read is normal.

Resume: The operation of the **Stop Button 8 14** on the DVD280 works differently from what you are used to on CD players. On a traditional CD player, when you press the Stop button, the unit does just that: It stops playback. On a CD player, when you press the Start button again, the disc starts from the beginning. With the DVD280, however, you have two options when playing DVD discs. Pressing the **Stop Button 8 14** once will stop the playback, but it actually puts the unit in the Resume mode. This means that you can turn the machine off and, when you press the **Play Button 6 12** the next time, the disc will resume or continue from the point on the disc where the **Stop Button 8 14** was pressed. This is helpful if you are watching a movie and must interrupt your viewing session but wish to pick up where you left off. Pressing the **Stop Button 8 14** twice will stop the machine in a traditional manner and, when the disc is played again, it will start from the beginning.

In Resume mode, the cover of the DVD will be displayed, if available. Otherwise, the JBL screen will appear. The resume function is not available for CDs or JPEG files. For DVDs only, the resume function will be retained even after the DVD280 has been placed in Standby mode by pressing the **Power On/Off Button 2 33**, but not after the unit has been fully powered down by pressing the **Main Power On/Off Button 1**, or after the unit has been unplugged from AC power.

Title: For a DVD, a title is defined as an entire movie or program. There may be as many chapters within a title as the producers decide to include. Most discs include only one title, but some may have more than one, to give you a "Double Feature" presentation or to include other special features. Press the **Title Button 18** to see a listing of the titles on a disc. When a disc has only one title, pressing the **Title Button 18** may show a list of the chapters.

WMA Files: WMA (Windows Media® Audio) is an audio compression format that was developed by the Microsoft® Corporation for use with its Windows Media Player. WMA files can be even smaller in size than MP3 files, while maintaining similar quality. The DVD280 is among the few DVD players capable of playing discs containing WMA files. Note that Windows Media Player uses other file formats; however, the DVD280 is only capable of playing files that end in the ".wma" extension.
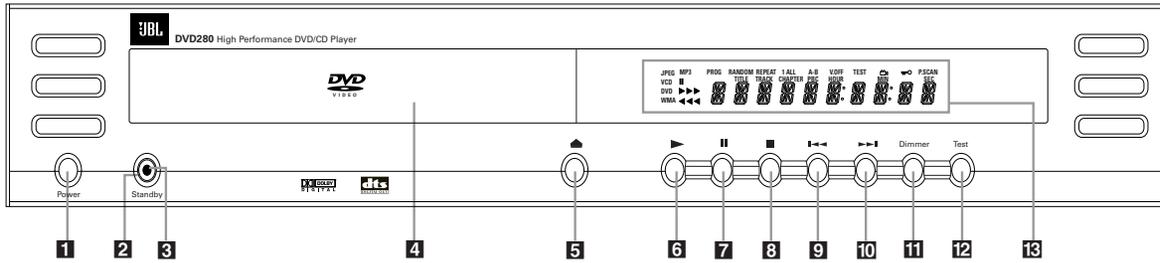
1 Main Power On/Off
2 Power On/Off (Standby)
3 Power Indicator
4 Disc Drawer
5 Eject

6 Play
7 Pause
8 Stop
9 Skip (Previous)
10 Skip (Next)

11 Dimmer
12 Test
13 Main Information Display

1 **Main Power On/Off:** Press this switch to apply power to the DVD280. Once the unit has been turned on with this switch, the **Power Indicator 3** will light up in red, and the DVD280 may be turned on from either the front panel or remote control. Press the switch again to turn the unit completely off.

2 **Power On/Off (Standby):** Press the button once to turn the DVD280 on, and the **Power Indicator 3** will turn orange. Press it again to put the unit in the Standby mode and the **Power Indicator 3** will turn back to red. Note that in order for this switch to operate, the **Main Power Switch 1** must be pressed in so that it is in the ON position.

3 **Power Indicator:** This LED will be illuminated in red when the unit is in the Standby mode to signal that the unit is ready to be turned on. When the unit is in operation, the indicator will turn orange.

4 **Disc Drawer:** This drawer is used to hold the discs played in the unit. Be certain to seat all discs carefully within the recess in the drawer. Do not press down on the drawer when it is open, to avoid damage to the player.

5 **Eject:** Press this button to open or close the disc tray.

6 **Play:** Press to initiate playback or to resume playback after the **Pause Button 7 10** has been pressed.

7 **Pause:** Press this button to momentarily pause playback. To resume playback, press the button again. If a DVD is playing, action will freeze and a still picture will be displayed when the button is pressed.

8 **Stop:** Press this button once to place the disc in the Resume mode. Playback will stop, but as long as the tray is not opened or the disc changed, DVD playback will continue from the same point on the disc when the **Play Button 6 12** is pressed again. Resume will also work if the unit was turned off. To stop a disc and have play start from the beginning, press the button twice.

9 **Skip (Previous):** Press this button to move backward through the music tracks on a CD or the chapters on a DVD.

10 **Skip (Next):** Press to move forward through the music tracks on a CD or the chapters on a DVD.

11 **Dimmer:** Press this button to reduce the brightness of the **Main Information Display 13** by 50% or to turn the display off completely in the following order: FULL BRIGHTNESS ➔ HALF BRIGHTNESS ➔ OFF ➔ FULL BRIGHTNESS.

12 **Test:** Press this button to display a test picture on the screen, which enables you to optimally adjust the color parameters on your video display, such as brightness, contrast, color intensity and tint.

13 **Main Information Display**: This display delivers messages and status information to help you operate the DVD player. See page 12 for a complete explanation of the display.

FRONT-PANEL INFORMATION DISPLAY
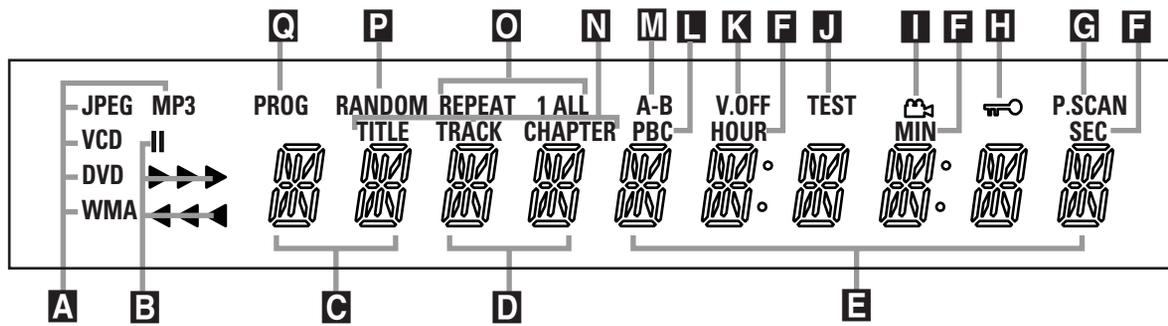
A Disc-Type Indicators
B Playback-Mode Indicators
C Title Number Indicators
D Chapter/Track Number Indicators
E Time Indicators
F Hour/Minute/Second Indicators
G Progressive Scan Indicator

H Parental Lock Indicator
I Angle Indicator
J Test Indicator
K V-OFF Indicator
L VCD Playback Control Indicator
M A-B Repeat Indicator
N Chapter/Track/Title Indicators

O Repeat Indicators
P Random Indicator
Q Program Indicator

A Disc-Type Indicators: The **DVD, CD, JPEG, MP3, VCD** or **WMA** indicator will light to show the type of disc currently being played.

B Playback-Mode Indicators: These indicators light to show the current playback mode:

▶ Lights when a disc is playing in the normal mode.

▶▶ Lights when the disc is in the Fast Search Forward mode. The on-screen banner display indicates the selected speed (2x, 16x, 64x, 200x). The third triangle will light when the search speed reaches 16x, and will remain lit if the speed is increased to 64x or 200x.

❚❚ Lights when the disc is paused.

◀◀ Lights when the disc is in the Fast Search Reverse mode. The on-screen banner display indicates the selected speed (2x, 16x, 64x, 200x). The third triangle will light when the search speed reaches 16x, and will remain lit if the speed is increased to 64x or 200x.

Note that the fast-search speeds above are for DVDs only. Fast-search is also available for VCDs, SVCDs and CDs, but only at two speeds, 4x and 32x. Fast-search is not available for MP3s or WMAs.

C Title Number Indicators: These two positions in the display will show the current title number when a DVD disc is playing.

D Chapter/Track Number Indicators: When a DVD disc is playing, these two positions in the display will show the current chapter. When a CD is playing, they will show the current track number.

E Time Indicators: These positions in the display will show the running time of a disc in play. When a DVD is playing, these indicators will show the time elapsed or remaining for the current chapter or title. When a CD, VCD or SVCD is playing, these indicators will show the time elapsed or remaining for the current track or disc. When an MP3 or WMA file is playing, these indicators will show the elapsed time for the current file. See page 35 for more information on the time display.

NOTE: The indicators **C** **D** **E** will also display text messages about the DVD280's status, including READING when a disc is loading, and DISC ERROR when a disc is not compatible with the DVD280.

F Hour/Minute/Second Indicators: These indicators are used with the **Time Indicators E** to show current, remaining or total time.

G Progressive Scan Indicator: This indicator lights when the DVD280's progressive scan video outputs are activated.

H Parental Lock Indicator: This indicator lights when the parental lock system is engaged in order to prevent anyone from changing the rating level without a code.

I Angle Indicator: This indicator blinks when alternative viewing angles are available on the DVD currently playing.

J Test Indicator: This indicator lights when the video test screen is activated.

K V-OFF Indicator: This indicator lights when the unit's video output has been turned off by pressing the **Video Off Button** ⑮ on the remote control.

L VCD Playback Control Indicator: This indicator lights when the playback control function is turned on for VCDs.

M A-B Repeat Indicator: This indicator lights when a specific passage for repeat playback has been selected.

N Chapter/Track/Title Indicators: These indicators are used with the **Title Number Indicators C** and the **Chapter/Track Number Indicators D** to display the current track for CDs, VCDs and SVCDs, and the current Title and Chapter for DVDs.

O Repeat Indicators: These indicators light when any of the Repeat functions are in use.

P Random Indicator: This indicator lights when the unit is in the Random Play mode.

Q Program Indicator: This indicator lights when the Playlist has been set to the programmed order using the Player Menu of the Graphic User Interface. See page 43 for more information.

REMOTE CONTROL FUNCTIONS

1. Power On
2. Repeat
3. Playlist
4. Audio
5. Eject
6. Navigation ▲/▼ Buttons
7. Info
8. Navigation ◀/▶ Buttons
9. Enter
10. Pause
11. Skip/Step (Previous)
12. Play
13. Search/Slow Reverse
14. Stop
15. Video Off
16. Display Dimmer
17. Clear
18. Title
19. Numeric Keys
20. Light
21. A-B Repeat
22. Zoom
23. Angle
24. Pic –
25. Pic +
26. Search/Slow Forward
27. Skip/Step (Next)
28. Status
29. Disc Menu
30. Setup
31. Subtitle
32. Random
33. Power Off

REMOTE CONTROL FUNCTIONS

❶ Power On: Turns on the player when it is in Standby mode (the **JBL** logo appears on-screen).

❷ Repeat: Press to go to the Repeat menu. You can repeat a title, chapter, track, programmed playlist or the entire disc.

❸ Playlist: Press this button to access the playlist on-screen menu. See page 43 for more information on programming playlists.

❹ Audio: Press to access various audio languages on a DVD (if the DVD contains multiple audio streams). This button may also allow you to access different audio formats on DVD discs, such as switching to the linear PCM or Dolby Digital 5.1 tracks (or other formats), if they've been recorded on the disc.

❺ Eject: Press to open or close the **Disc Drawer ❹**.

❻ Navigation ▲/▼ Buttons: Use to select and execute items or settings.

❼ Info: Press for detailed information on the disc playing (Video/Audio bit rate, Movie aspect ratio and others). Note that the unit will not react to any transport button as long as the info menu is displayed. Press again to remove information from screen.

❽ Navigation ◀/▶ Buttons: Use to select and execute items or settings.

❾ Enter: Use to execute selections in the menu system or as prompted.

❿ Pause: Freezes a picture (with DVD/VCD) and pauses the playback signal (CD) when a disc is playing. Press again for normal playback.

⓫ Skip/Step (Previous): Press to go to the beginning of the current track. Press again quickly to go to the beginning of the previous track. When the **Pause Button ❿** has been pressed during playback, the picture reverses frame by frame each time this button is pressed. The step function is only available for DVDs, VCDs and SVCDs.

⓬ Play: Press this button to begin playback of the disc (closes the **Disc Drawer ❹** first, if it is open).

⓭ Search/Slow (Reverse): Allows you to search in reverse through a disc while it is in Play mode. Each time you press this button while a DVD is playing, the search speed changes as below:

R. SEARCH 2x ➜ R. SEARCH 16x ➜ R. SEARCH 64x ➜ R. SEARCH 200x ➜ R. SEARCH 2x

Two fast-search speeds are available for VCDs, SVCDs and CDs: 4x and 32x. Fast-search is not available for MP3s or WMAs.

This button also allows you to play movies in Slow mode. Each time you press this button while a DVD is playing, and after pressing the **Pause Button ❿**, the slow speed will be changed as below:

R. SLOW 1/2x ➜ R. SLOW 1/4x ➜ R. SLOW 1/8x ➜ R. SLOW 1/16x ➜ R. SLOW 1/2x

Slow-speed playback is not available for CDs, or for MP3 and WMA discs. Two slow-play speeds are available for VCDs and SVCDs: 1/2x and 1/4x. See page 30 for more information on fast-search and slow-play.

⓮ Stop: Stops playing a disc. When a disc is playing, if you press the **Stop Button ❽⓮** once, then the **Play Button ❻⓬**, the disc will resume play; i.e., it will start from the same point on the disc where the unit was stopped. If you press the **Stop Button ❽⓮** twice, then the **Play Button ❻⓬**, the disc will start play from the beginning. The resume function is not available for CDs. The resume function is available after the unit has been placed in the Standby mode by pressing the **Power On/Off (Standby) Button ❷㉝** and then powered on again, but only for DVDs.

⓯ Video Off: Press to turn off video output for improved performance from audio-only discs. Press again to restore video output (see page 39).

⓰ Display Dimmer: Press to change the brightness of the front-panel display or to turn the display off completely in the following order: FULL BRIGHTNESS ➜ HALF BRIGHTNESS ➜ OFF ➜ FULL BRIGHTNESS

⓱ Clear: Press to remove the On-Screen Banner Display from the screen.

⓲ Title: Press this button while a disc is playing to display the current title number. Press it again to jump to the next numbered title on the disc. Note that this function often remains active even when the disc's software prohibits title jumping using the **Skip/Step (Next) Button ㉗**.

⓳ Numeric Keys: Select numbers by pressing these buttons.

⓴ Light: Press to illuminate the buttons on the remote control.

㉑ A-B Repeat: Press to select the beginning and end of passage A-B, which will play repeatedly.

㉒ Zoom: When a DVD, JPEG, VCD or SVCD disc is playing, press this button to zoom the picture so that it is enlarged. There are four steps to the zoom function, each progressively larger. Press through each of the zoom stages to return to a normal picture. Use the **Navigation ▲/▼/◀/▶ Buttons ❻❽** to view different areas of the enlarged image. Only two enlargement sizes are available for VCDs and SVCDs (2x and 4x).

㉓ Angle: Press to access various camera angles on a DVD (if the DVD contains multiple camera angles). When a JPEG is being displayed, pressing the **Angle Button ㉓** repeatedly causes the on-screen image to rotate clockwise by 90 degrees each press. If the disc also contains audio MP3 or WMA files, this portion of the disc must be deactivated by pressing the **Setup Button ㉚** to display the on-screen menu system. Use the **▲/▼/◀/▶ Navigation Buttons ❻❽** to highlight the Audio icon on the left side of the Player Menu, and press the **Enter Button ❾** to deactivate it.

㉔ Pic–: When playing a disc containing JPEG still image files, press this button to view the previous picture.

㉕ Pic+: When playing a disc containing JPEG still image files, press this button to view the next picture.

26 Search/Slow (Forward): Allows you to search forward through a disc while it is in Play mode. Each time you press this button while a DVD is playing, the search speed changes as below:

F. SEARCH 2x ➜ F. SEARCH 16x ➜ F. SEARCH 64x ➜ F. SEARCH 200x ➜ F. SEARCH 2x

Two fast-search speeds are available for VCDs, SVCDs and CDs: 4x and 32x. Fast-search is not available for MP3s or WMAs.

This button also allows you to play movies in Slow mode. Each time you press this button while a DVD is playing, and after pressing the **Pause Button 10**, the slow speed will be changed as below:

F. SLOW 1/2x ➜ F. SLOW 1/4x ➜ F. SLOW 1/8x ➜ F. SLOW 1/16x ➜ F. SLOW 1/2x

Slow-speed playback is not available for CDs, or for MP3 and WMA discs. Two slow-play speeds are available for VCDs and SVCDs: 1/2x and 1/4x. See page 30 for more information on fast-search and slow-play.

27 Skip/Step (Next): Press to go to the beginning of the next track. When the **Pause Button 10** has been pressed during playback, the picture advances frame by frame each time this button is pressed. The step function is only available for DVDs, VCDs and SVCDs.

28 Status: Press while a disc is playing to view the on-screen status banner display. Use the **Navigation ▲/▼/◀/▶ Buttons 6 8** to move through the different features in the Banner Display. When a value is highlighted, such as Track Number or Time Remaining, press the **Enter Button 9** to select it. The banner will display the available options. Scroll through the options using the **Navigation ◀▶ Buttons 8** and press the **Enter Button 9** to select the desired option.

29 Disc Menu: Displays the DVD disc menu on-screen in Play mode.

30 Setup: Press to access the DVD280's on-screen menu system.

31 Subtitle: When a DVD is playing, press to select a subtitle language or to turn subtitles off.

32 Random: Press for playback in random order. The Random function is not available when playing DVDs, except for random playback of a programmed playlist. It is available when playing both commercial and recordable audio CDs and VCDs, and discs containing MP3, WMA or JPEG files.

33 Power Off: Turns off the player to Standby mode.

REAR-PANEL CONNECTIONS
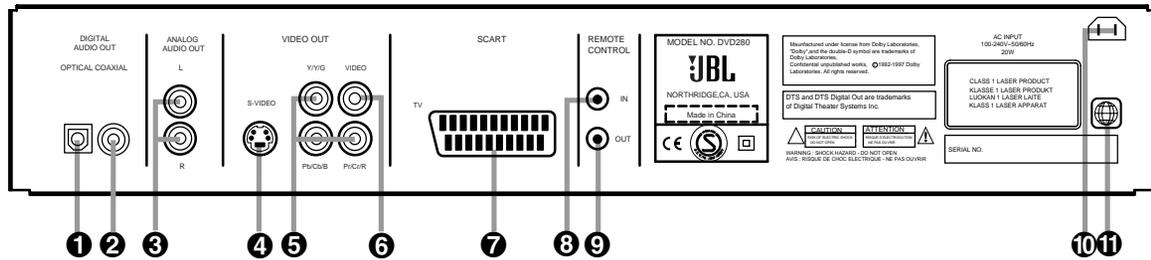
❶ Optical Digital Output
❷ Coaxial Digital Output
❸ Analog Audio Outputs
❹ S-Video Output

❺ Component Video Outputs
❻ Composite Video Output
❼ SCART Out (TV)
❽ Remote Control Input

❾ Remote Control Output
❿ AC Power Cord Jack
⓫ Region Code

❶ **Optical Digital Output:** Connect this jack to the optical digital input of an A/V receiver or surround processor for Dolby Digital, DTS or PCM audio playback.

❷ **Coaxial Digital Output:** Connect this jack to the coaxial digital input of an A/V receiver or surround processor for Dolby Digital, DTS or PCM audio playback.

NOTES:

• Connect either the **Optical Digital Output** ❶ or the **Coaxial Digital Output** ❷ to a corresponding digital audio input on your receiver or processor, but not both.

• The coaxial digital output should only be connected to a digital input. Even though it is the same RCA-type connector as standard analog audio connections, DO NOT connect it to a conventional analog input jack.

❸ **Analog Audio Outputs:** You may connect these outputs to the DVD Audio inputs on your receiver or processor in addition to the optical or coaxial digital audio connection. You may also need to make these connections if your receiver or processor does not have digital audio inputs, or if you are connecting the DVD280 directly to a television.

❹ **S-Video Output:** Connect this jack to the S-video input on a television or video projector, or to an S-video input on an A/V receiver or processor if you are using that type of device for S-video input switching.

❺ **Component Video Outputs:** These outputs carry the component video signals for connection to display monitors with component video inputs. For standard analog TVs or projectors

with inputs marked Y/Pr/Pb or Y/Cr/Cb, connect these outputs to the corresponding inputs. If you have a high-definition television or projector that is compatible with high-scan-rate progressive video (480P), connect these jacks to the HD component inputs. PROGRESSIVE must be selected in the Video menu, if you are using a progressive scan display device, in order to take advantage of the progressive scan circuitry. See the "Scan Type" section on page 26 for more information on progressive scan video.

IMPORTANT: These jacks should NOT be connected to standard composite video inputs.

❻ **Composite Video Output:** Connect this jack to the video input on a television or video projector, or to a video input on an A/V receiver or processor if you are using that type of device for video input switching.

❼ **SCART Out (TV):** If your TV has a SCART socket, you may connect a SCART cable to your TV and to your DVD player for improved video quality. The SCART cable carries both audio and video. Select Composite Video or RGB video for the SCART connector's video output signal (see page 26).

❽ **Remote Control Input:** Connect the output of a remote infrared sensor, or the remote control output of another compatible product, to this jack. This will enable the remote control to operate even when the front-panel remote sensor on the DVD280 is blocked. This jack may also be used with compatible IR remote control-based automation systems.

❾ **Remote Control Output:** Connect this jack to the infrared (IR) input jack of another compatible remote-controlled product to have the built-in remote sensor on the DVD280 provide IR signals to other compatible products.

❿ **AC Power Cord Jack:** Connect the correct plug for your area here and to an AC outlet. If the outlet is controlled by a switch, make certain that it is in the ON position.

⓫ **Region Code:** This player is designed and manufactured for compatibility with Region Management Information that is encoded on most DVD discs. This Region Code is usually displayed on the DVD case and the disc. This player has been configured by the factory for playback of discs containing a specific Region Code, which is indicated on the carton and here on the rear panel of the unit, and for discs that do not contain Region Code information. If there is any other Region Code on a disc, it will not play on the DVD280. Consult with your local JBL dealer or distributor if you have any questions regarding the Region Code setting of this player.

NOTE: You'll find more details about all audio/video connections under Setup and Connections on the following pages.

SETUP AND CONNECTIONS

• Ensure that the power switch of this unit (and of other equipment to be connected) is set to "Off" before commencing connection.

• Do not block the ventilation holes of any of the equipment and arrange them so that air can circulate freely.

• Read through the instructions before connecting other equipment.

• Ensure that you observe the color-coding when connecting audio and video cables.
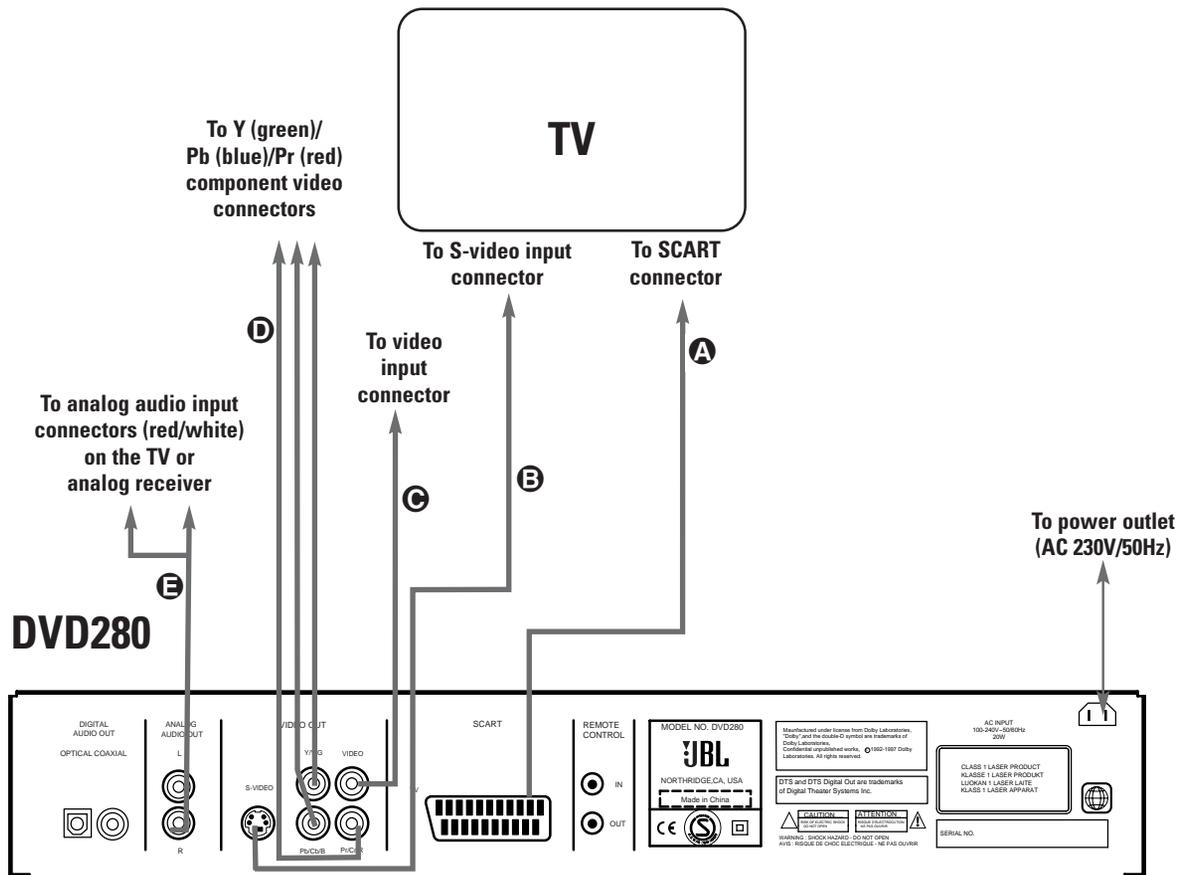
VIDEO NOTES:

• While we suggest the use of component video for higher quality pictures, you may also use the standard S-video or composite video connection if your TV does not have component video inputs. *Never connect more than one video output from the DVD player to your TV or A/V receiver; use only one of them.*

• The composite video output (yellow) combines the complete video signal (composite) and sends it to the TV (or to the A/V receiver) by one cable only. Use the video output when your TV set is equipped with a video input jack only.

• The S (separate) video output connector separates the color (C) and luminance (Y) signals before transmitting them to the TV set in order to achieve a sharper picture. Use the S-video cable when connecting the player to a TV equipped with an S-video input for improved picture clarity.

• The component video outputs further separate the color components of the video signal, optimizing the DVD280's video performance. Component video connections are preferred, when available, on your TV or receiver. If you are using a television or video display that is compatible with high-resolution 480P video signals, make sure to use the input jacks on the video marked "HD Component," if available. Also, make sure to configure the display's input settings for use with "480P" video signals. You will also need to change the scan type in the DVD280's Video Setup menu from "Interlaced" to "Progressive." See page 26.

• Some TVs are equipped with SCART connectors rather than with a normal video input (yellow cinch). In that case, the SCART connection should be used. It will provide the audio signal, so no connection from the **Analog Audio Outputs ❸** to the TV is necessary. Separate analog audio connections to the TV are needed only if your TV is connected to the **Component Video Outputs ❺**, the **Composite Video Output ❻** or the **S-Video Output ❹**. If you will be using a receiver or processor with component, S- or composite video connections, then no audio connection needs to be made to the TV. If you will be using a receiver or processor with the SCART connection to the TV, then turn the volume control on the TV all the way down.

IMPORTANT NOTES ON SCART AND RGB FORMAT:

• Your DVD280 is equipped with a SCART connector for direct connection to a compatible TV.

• The SCART connector provides the video signal as well as audio (stereo L/R) signals.

• The SCART connector for the TV provides the composite video signal or the direct RGB signal, delivering the best video performance possible, selectable in the on-screen menu system. To view RGB video on your TV, the RGB-compatible SCART connector on the TV must be used and the DVD280's TV SCART connector must be set to "RGB" (see page 26).

• Note that with RGB video, the color intensity cannot be adjusted with most TVs.

• When the RGB video signal is used, DVDs recorded with the NTSC format can be viewed even on non-NTSC-compatible TVs, as long as the Region Code is correct for your area.

Connecting to a TV Only

When using the DVD280 with a television but no audio receiver or processor, connect it as follows. *Either* make only the SCART connection **A** from the DVD280 to the TV, *or* make the analog audio connection **E** and *one* of the video connections (S-video **B**, composite video **C** or component video **D**). Remember to plug in the power cord.

To Y (green)/
Pb (blue)/Pr (red)
component video
connectors

TV

To S-video input
connector

To SCART
connector

D

To video
input
connector

A

To analog audio input
connectors (red/white)
on the TV or
analog receiver

B

C

To power outlet
(AC 230V/50Hz)

E

DVD280

DIGITAL AUDIO OUT
OPTICAL COAXIAL

ANALOG AUDIO OUT
L

VIDEO OUT
Y/VG   VIDEO

S-VIDEO

Pb/Cb/B   Pr/Cr/R

R

SCART

REMOTE CONTROL

IN

OUT

MODEL NO. DVD280

JBL

NORTHRIDGE,CA, USA
Made in China

Manufactured under license from Dolby Laboratories.
"Dolby",and the double-D symbol are trademarks of
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Confidential unpublished works. ©1992–1997 Dolby
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DTS and DTS Digital Out are trademarks
of Digital Theater Systems Inc.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

ATTENTION
RISQUE D'ELECTROCUTION
NE PAS OUVRIR

WARNING : SHOCK HAZARD - DO NOT OPEN
AVIS : RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR

AC INPUT
100-240V~50/60Hz
20W

CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT
LUOKAN 1 LASER LAITE
KLASS 1 LASER APPARAT

SERIAL NO.

SETUP AND CONNECTIONS

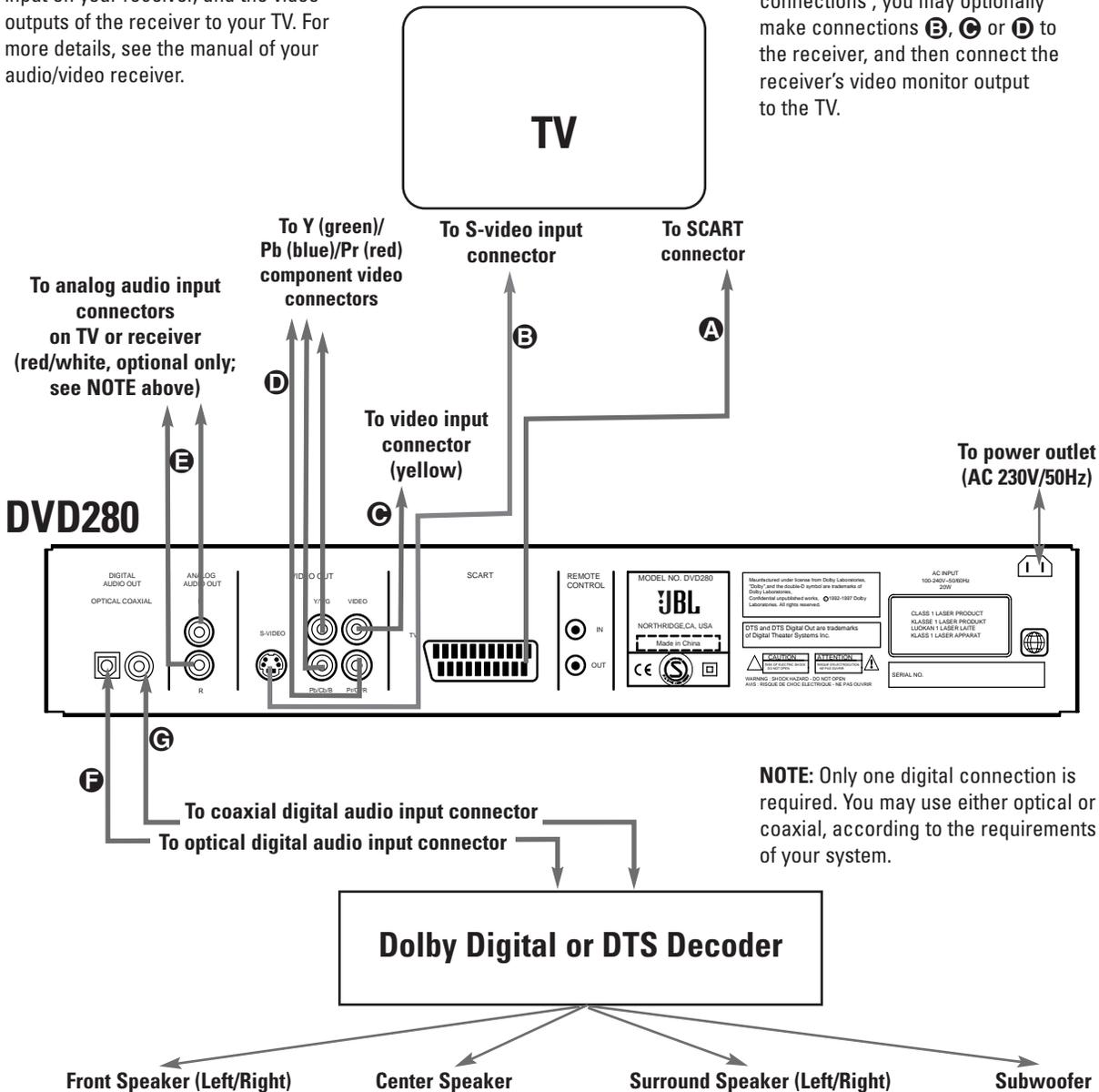## Connecting to a Receiver/Amplifier With a Dolby Digital or DTS Decoder

When DVDs encoded in Dolby Digital or DTS are played, the Dolby Digital or DTS bitstream is outputted from the player's optical or coaxial digital audio output. When the player is connected to a Dolby Digital or DTS decoder, you can enjoy theater-quality audio in your home. An optical digital audio cable or coaxial audio cable (not supplied) is required for these connections, as shown below. Only one connection is needed, not both at the same time.

NOTE: With multiple video sources, your audio/video receiver can be used for selecting the video signal and routing it to the TV. Connect the **Component ⑤**, **Composite ⑥** or **S-Video ④** output of the DVD280 to the correct video input on your receiver, and the video outputs of the receiver to your TV. For more details, see the manual of your audio/video receiver.

NOTE FOR ANALOG AUDIO: The connection from the **Analog Audio Output ③** to the TV is optional. If you plan on using your DVD280 alone, without turning on your complete system, this connection must be made, unless you've used the **SCART ⑦** connection; then you can turn up the TV´s volume, as needed. The **Analog Audio Outputs ③** may also be connected to the standard analog left/right DVD or CD inputs on your receiver or processor, if you wish to use the DVD280 as the input for a multiroom system.

Connecting to a Receiver

When using the DVD280 with an audio receiver or processor, connect it as follows. First, make either the SCART connection Ⓐ or one of the video connections (S-video Ⓑ, composite video Ⓒ or component video Ⓓ) to the TV. If you will sometimes use the TV without the audio component and you did not choose the SCART connection Ⓐ, you may optionally make the analog audio connection Ⓔ to the TV. Second, make either the optical digital audio connection Ⓕ or the coaxial digital audio connection Ⓖ, to the receiver or processor. If your receiver or processor is equipped with video connections , you may optionally make connections Ⓑ, Ⓒ or Ⓓ to the receiver, and then connect the receiver's video monitor output to the TV.

TV

To Y (green)/ Pb (blue)/Pr (red) component video connectors

To S-video input connector

To SCART connector

To analog audio input connectors on TV or receiver (red/white, optional only; see NOTE above)

Ⓓ

Ⓔ

Ⓑ

Ⓐ

To video input connector (yellow)

To power outlet (AC 230V/50Hz)

Ⓒ

DVD280

Ⓖ

Ⓕ

To coaxial digital audio input connector

To optical digital audio input connector

NOTE: Only one digital connection is required. You may use either optical or coaxial, according to the requirements of your system.

Dolby Digital or DTS Decoder

Front Speaker (Left/Right)   **Center Speaker**   **Surround Speaker (Left/Right)**   **Subwoofer**

Battery Installation

Insert the batteries supplied while observing the correct (+) and (–) polarities.
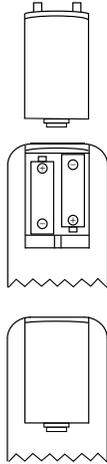
Service Life of Batteries

• The batteries normally last for about one year, although this depends on how often, and for what operations, the remote control is used.

• If the remote control unit fails to work even when it is operated near the player, replace the batteries.

• Use fresh alkaline AA batteries.

NOTES:
• Do not attempt to recharge, short-circuit, disassemble or heat batteries; do not throw them into fire.

• Do not drop, step on or otherwise batter the remote control unit. This may damage the parts or lead to a malfunction.

• Do not mix old and new batteries.

• Wipe away any leakage inside the remote control unit, and install new batteries.

• If leakage should come into contact with your skin, immediately wash it off thoroughly with water.

• Batteries contain chemical substances and we recommend that you dispose of them properly and in compliance with any local regulations.

Remote Control Operation Range

Point the remote control unit from no more than about 20 feet from the remote control sensor and within about 60 degrees of the front of the unit.
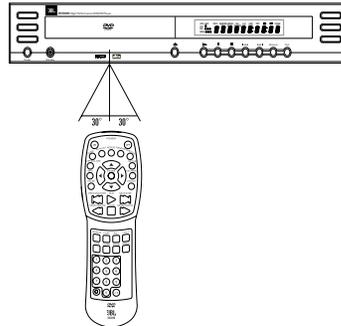
• The operating distance may vary, according to the brightness of the room.

NOTES:
• Do not point bright lights at the remote control sensor.

• Do not place objects between the remote control unit and the remote control sensor.

• Do not use this remote control unit while simultaneously operating the remote control unit of any other equipment.

Optical Digital Audio Connection Notes

• Remove the dust protection cap from the optical digital audio output and connect the cable firmly so that the configurations of both the cable and the connector match.

• Keep the dust protection cap and always reattach the cap when not using the connector.

Audio Output From the Unit's Optical/Coaxial Digital Audio Output Connector

Disc:	Sound recording format:	Optical/coaxial digital audio output:
DVD	Dolby Digital	Dolby Digital bitstream (2–5.1ch) or PCM (2ch, 48kHz, 16-bit)†
	Linear PCM (48/96kHz, 16/20/24-bit)	Linear PCM (2ch) (48/96kHz, 16/20/24-bit)
	DTS	Bitstream or no output†
	MPEG (2.0)	MPEG bitstream (2ch) or linear PCM (2ch, 48kHz)
VCD	MPEG-1 CD-DA	Linear PCM†
CD	Linear PCM	Linear PCM (44.1kHz sampling)
	MP3 (MPEG-1 Audio Layer 3)	Linear PCM (44.1–48kHz, depending on source, if digital output format selected as "Original"). (48kHz if digital output format selected as "PCM")
	WMA (Windows Media Audio)	Linear PCM (32–48kHz)

† Digital output format must be selected as "Original" or "PCM" in Audio submenu (see page 25).

For Your Reference:

• Dolby Digital is a digital sound compression technique developed by the Dolby Laboratories Licensing Corporation. Supporting 5.1-channel surround sound, as well as stereo (2-channel) sound, this technique enables a large quantity of sound data to be efficiently recorded on a disc.

• DTS is another digital audio technology developed by Digital Theater Systems, Inc. It supports 5.1 and 6.1 digital surround sound, depending on the specific disc, thanks to a sophisticated encoding system. Some receivers and processors also feature DTS-ES® and DTS Neo:6® matrix decoders that may be used with DTS 5.1 discs to derive the surround back channel.

• Linear PCM is a signal recording format used in CDs. While CDs are recorded in 44.1kHz/16-bit, DVDs are recorded in 48kHz/16-bit, up to 96kHz/24-bit.

• If you have a Dolby Pro Logic Surround decoder connected to the DVD280's analog audio out connectors, thanks to the "Downmix" function of the DVD280, you will obtain the full benefit of Pro Logic from the same DVD movies that provide full 5.1-channel Dolby Digital soundtracks, as well as from titles encoded with Dolby Surround.

• The DVD280 is designed to digitally output 96kHz PCM audio with a 96kHz sampling rate. The 96kHz indication will appear in the Disc Information on-screen display. See page 37. However, some 96kHz DVDs may include copy protection codes that do not permit digital output. For full 96kHz fidelity from these discs, use the analog outputs of the DVD280. If your surround processor converter does not support 96kHz PCM audio, you must use the DVD280 analog outputs for full 96kHz fidelity with these discs.

• When connecting an amplifier (with an optical/coaxial digital input) that does not contain a Dolby Digital or DTS decoder, be sure to select PCM as the initial setting in the Digital Output menu (see page 18). Otherwise, any attempt to play DVDs may cause such a high level of noise that it may be harmful to your ears and damage your speakers.

• CDs can be played as they would normally be played.

NOTE: Some first-generation DTS decoders that do not support DVD-DTS interface may not work properly with the DVD/CD player.

Dolby Digital and DTS

Both Dolby Digital and DTS are audio formats used to record 5.1-channel audio signals onto the digital track of film. Both of these formats provide six separate channels: left, right, center, left rear, right rear and common subwoofer.

The latest discs may include the 6.1-channel formats, such as Dolby Digital EX and DTS-ES® Discrete. These formats add an additional surround back channel behind the listener to create an even more realistic sense of envelopment.

Remember that Dolby Digital or DTS will only play 5.1- or 6.1-channel sound if you've connected the optical or coaxial output of the DVD280 to a DTS or Dolby Digital receiver or decoder (see page 19) and if the disc was recorded in the Dolby Digital or DTS format.

The final step of the installation is to establish the system's defaults. It is helpful to take a few minutes to familiarize yourself with these settings, as they may require change before the first use and later from time to time.

Make certain that the DVD280 is properly connected to a video display, and that power is connected. Turn the DVD280 on by first pressing in the **Main Power On/Off** 1 and then pressing the **Power On Button** 2 ❶. For this process, however, you do not need to load a disc into the unit.

On-Screen Menu System

The DVD280 uses an elegant but simple on-screen menu system for setup and control functions. Activate the system by pressing the **Setup Button** ❸⓪. The system may be activated whether or not a disc has been loaded, whether or not that disc is currently playing, and even when the unit has been paused. As described throughout the manual, some functions may or may not be available, depending on whether a disc is loaded or playing.

The menu displays will remain on-screen until you press the **Setup Button** ❸⓪ again, or the **Clear Button** ❶❼, to clear them. However, during DVD playback, the menu system will remain on-screen for only three seconds. The menus are translucent, so that you may still view the program material through them.

There are two main menus, the Player Menu and the Setup Menu, each of which also contains several submenus. The Player Menu displays information about the current disc, and allows you to program play of the disc. The Setup Menu displays the settings for the player, and enables you to configure the audio and video parameters.

The menu system is navigated using the **Navigation** ▲/▼/◀/▶ **Buttons** ❻❽, and selections are made using the **Enter Button** ❾. When an icon or word on-screen is highlighted so that it looks like a button, you may select it by pressing the **Enter Button** ❾. The item will then appear to be a depressed button. An instruction will appear on the bottom of the screen directing you to take further action or to choose from a list of options, one of which will be highlighted. A trian-

gle displayed to the right of the options means that additional options may be viewed by scrolling to the right using the **Navigation** ◀/▶ **Buttons** ❽. Similarly, a triangle displayed to the left of the options means that additional options may be viewed by scrolling to the left. Throughout this manual, when you are asked to "scroll" in a certain direction, or move the cursor, it means to use the **Navigation** ▲/▼/◀/▶ **Buttons** ❻❽ to move the visible cursor or to cause a new icon to appear highlighted on-screen. When you are asked to select an icon, it means to use the **Navigation** ▲/▼/◀/▶ **Buttons** ❻❽ until the icon is highlighted, and then to press the **Enter Button** ❾.

Configuring the DVD280

The DVD280 is configured for the first time by accessing the Setup Menu. Press the **Setup Button** ❸⓪, and scroll to the right to highlight "Setup". The Setup Menu will appear (see Figure 1).

Figure 1

The Setup Menu consists of four submenus, represented by icons stacked on the left side of the screen: System, Audio, Video and Video Adjustments. These settings are normally made only once, and remain in effect as long as the DVD280 is not reset or unplugged for more than two weeks. However, you may go back later and adjust any settings, as needed.

System Submenu Settings

The System submenu should be active. If it isn't, move the cursor to highlight its icon and select it by pressing the **Enter Button** ❾.

The System submenu contains several global settings that affect the operation of the player. Review this section and make sure that the settings are appropriate for your system.

The **Display Language** setting allows you to select the language in which the DVD280's control menus and messages appear. By default, the DVD280 will display menus and other messages in English. If you wish to display messages in a different language, move the cursor to the right and up or down until the current setting for Display Language is highlighted, and select it. The options for other languages will be displayed on the bottom of the screen. Move the cursor to the desired language and select it (see Figure 2).

Figure 2

The **Subtitle Language** setting allows you to select the language that will be used to display the subtitles that accompany a DVD's audio track. You may select the language, or turn the Subtitle system off altogether. After the Subtitle setting has been selected, scroll to the right through the options to reveal additional options, including "Other" and "Off" (see Figures 3 and 4).

Figure 3

Figure 4

The "Other" option allows you to enter a code for another language from the list shown on page 45 of this manual.

Figure 5

Select "Off" to turn off subtitles. This setting may be changed later, or using the **Subtitle Button ❸❶** on the remote. If the subtitle language is changed using the **Subtitle Button ❸❶**, the change will only be effective for that disc. Note that in order for the selected subtitle language to appear, it must be present on the disc. Consult the disc jacket for information on the subtitle languages available.

The **Panel Time-Out** setting allows you to select the length of time the front-panel display remains illuminated during disc playback (as some people find the front-panel display to be distracting while a movie is playing). You may program the DVD280 to refresh the front-panel display only when a button is pressed on the remote or front panel, and to turn the display off again after either 5 or 20 seconds (see Figure 6). When the display is off, the orange **Power Indicator ❸** will remain lit to remind you that the unit is turned on. When the Panel Time-Out setting is set to "Off," the display remains lit at all times. This feature is only in effect when a DVD, VCD or SVCD is playing. However, you may always press the **Dimmer Button ❶❶❶❻** to dim the front-panel display either by half or fully.

Figure 6

The **Status Bar Time-Out** setting allows you to select the length of time the Status Bar remains on-screen. The Status Bar appears when the **Status Button ❷❽** is pressed dur-

ing disc play, and it displays the title, chapter/track, play mode and elapsed or remaining time of the current disc. The Status Bar display is also used for selecting repeat and random modes, audio tracks, subtitle tracks or multiple angles. You may program the Status Bar to remain on-screen for either 5 or 20 seconds (see Figure 7). When set to "Off," the Status Bar will remain on-screen until it is manually cleared by pressing either the **Status Button ❷❽** or the **Clear Button ❶❼**. The Audio, Playlist, Repeat/Random and Subtitle Status Bars include a "Done" button on the right. When the "Done" button is on-screen, you may use the **Navigation ▲/▼/◀/▶ Buttons ❻ ❽** to scroll until it is highlighted, then select it by pressing the **Enter Button ❾**. This will also clear the Status Bar from the screen.

The mini Status Bar that appears on-screen in response to certain actions, such as opening or closing the **Disc Drawer ❹**, will always disappear after two seconds.

Figure 7

Parental Control
The DVD280's Password System is used to control viewing of restricted programs and offers the capability to change the password itself and the rating. The DVD280 is shipped with "8888" as the default password and with the parental control settings off. The following instructions will show how to change the password and lock the settings.

NOTE: The DVD must be specifically encoded with rating information for Parental Control to work.

The Rating Levels
The five MPAA rating symbols are "G" (General, Level 1), "PG" (Parental Guidance, Level 3), "PG13" (Parental Guidance and 13 years old, Level 4), "R" (Restricted, Level 6) and "NC 17" (from 17 years old, Level 7). The DVD280 will accommodate a total of

eight rating steps, as set by the DVD creators. These additional steps allow for more critical control of program playback for all audiences.

Level 8: All DVDs, including adult materials, can be played.

Levels 7 to 2: DVDs for general audiences/children can be played.

Level 1: DVDs for children can be played; DVDs for adults/general audiences are prohibited.

Password
If you change the password from the factory default setting, please remember to write the new password in a safe place. You cannot access rated discs or rating/password menus or change or clear the password (see below) without entering the correct password.

If you forget your password, you can reset the DVD280 to the factory default password (8888) after clearing the on-screen menus from the display by pressing and holding the **Clear Button ❶❼** for more than 5 seconds. **NOTE:** This will restore *all* menu settings to the factory default settings. Any changes you have made will be lost.

Select "Parental Control" and enter the password "8888" (see Figure 8).

Figure 8

Figure 9

It is recommended that you scroll to the right to the "New Password" option, to set a new password the first time you use the DVD280 (see Figures 9 and 10). When prompted to

select the desired parental control level, use the **Navigation ◄/► Button** ❽ to scroll to the "New Password" option and select it by pressing the **Enter Button** ❾ (see Figure 10).

Figure 10

You will be prompted to enter the new password (see Figure 11).

Figure 11

You will then be prompted to confirm the new password by reentering it (see Figure 12).

Figure 12

If you make a mistake, you will be prompted to reenter and confirm your new password. If you entered your password incorrectly when you first selected the Parental Control function, you will be prompted to reenter it (see Figure 13).

Figure 13

After you have entered or changed the password, you may go back and set the level of access (see Figure 9). The lowest setting, "1G" refers to materials targeted for a general audience and considered to be appropriate for all. Higher ratings are given to materials targeted toward older, more mature audiences; those materials may not be appropriate for younger viewers, as described above. More information about ratings is available at www.mpaa.org/movieratings/.

The DVD280 is capable of playing Video CDs (VCDs), a format that predates DVD. If you plan on playing VCDs, it is recommended that you set the **Playback Control (PBC) Support** setting to "On" (see Figure 14). However, if you wish to use the Repeat and Random functions of the DVD280, they will only be available with this setting turned off. See page 42 for more information.

Figure 14

The DVD280 offers a **Screen Saver** option to protect your TV or video display from damage that may occur if the player is left turned on with the same still image for a period of time. There is a possibility that the image may be "burned" into some display devices. This is particularly important for plasma displays. Set Screen Save to "On" so that the DVD280 will run the screensaver when no action has been detected for 5 minutes. Press a desired command key on the front panel or remote to "wake" the DVD280 and resume normal operation (see Figure 15).

Figure 15

Some DVDs are programmed with **Multiple Angle Capability**, allowing you to view the same scene from a different angle. Normally, the angle icon will be displayed on-screen during those scenes to inform you that you may press the **Angle Button** ㉓ to change to a different view. If you would find the appearance of the icon on-screen distracting, select the Show Angle Icon setting in the System submenu, and set it to "Off" (see Figure 16). The **Angle Indicator** ❙ will flash in the front-panel display whenever multiple angles are available, regardless of whether the on-screen icon appears.

Figure 16

Audio Submenu Settings

Select the Audio submenu to configure the general audio settings, such as preferred language and digital audio settings.

Move the cursor to the Audio submenu icon on the left side of the screen. This icon shows a gear (see Figure 17). Press the **Enter Button** ❾ to display the Audio submenu.

Figure 17

The **Preferred Audio Language** setting is used to select the default language in which you wish to hear program materials. The factory default setting is English, but you may choose from French, Spanish, German, Italian or another language programmed by selecting "Other" and entering a code from the list on page 45 of this manual. The chosen language must be available on the

Figure 18

disc in play (see Figures 18 – 20). You may also change the language during disc playback by pressing the **Audio Button ❹**, but any changes made will only be effective during playback of that disc.

Figure 19

Figure 20

If you are using the **Optical ❶** or the **Coaxial ❷ Digital Audio Output** with an audio/video receiver or processor, you may select the **Digital Output Format**. If your receiver or processor is capable of decoding signals in the Dolby Digital or DTS format, select "Original" to make sure that these formats are passed through to the receiver for optimal audio performance. However, if your receiver or processor is not capable of decoding these formats, set the digital output to "PCM" to enable the receiver or processor to play back 2-channel audio or use matrix decoding (e.g., Dolby Pro Logic I or II) if available (see Figure 21). Changes to this setting that are made during disc playback will not take effect until after play is stopped and restarted.

Figure 21

The **PCM Limit** setting enables you to select the sample rate for the digital audio output of the DVD280 that is compatible with the circuitry in your receiver or processor. Consult the owner's manual for the receiver or processor to determine the maximum sampling rate your receiver or processor is capable of handling. Select the "48kHz" option if your receiver or processor is not capable of resolving digital signals greater than 48kHz, or if you are uncertain of your equipment's capabilities. The DVD280 will down-sample any program material with higher sample rates so that it is compatible with your equipment. If your receiver or processor is capable of handling digital signals up to 96kHz, select that option. If your receiver or processor is capable of handling digital signals up to 192kHz, select the "No Limit" option. In this case, all signals will be passed through at their native rates without down-sampling. If you select the "96kHz" or "No Limit" options when your equipment is not capable of handling higher-resolution signals, then you will not hear any audio when a higher-resolution disc is played. Change this setting to "48kHz" so that the audio will be properly down-sampled (see Figure 22).

Figure 22

The **Dynamic Range** setting allows you to take advantage of the programming present on some Dolby Digital recordings to reduce the volume of louder, peak passages so as to avoid disturbing others, while maintaining intelligibility of quieter passages. The DVD280 accomplishes this by compressing the audio to a greater or lesser degree, depending on which setting you choose. The Minimum compression setting does not affect the original soundtrack at all. At the Medium compression setting, louder passages are a little bit quieter. At the Maximum compression setting, louder passages are much softer. Feel free to experiment with the settings at any time. Note that if your receiver or processor also allows you to program the dynamic range setting and you have already done so, it is not necessary to program the dynamic range on the DVD280 and you should leave this setting at "Minimum" (see Figure 23).

Figure 23

Video Submenu Settings

The Video submenu is used to configure the DVD280 for compatibility with your video display.

Move the cursor to the Video submenu icon on the left side of the screen. This icon shows a gear, and differs from the icon immediately below it (the Video Adjustments submenu, which shows a set of slide controls). (See Figure 24.) Press the **Enter Button ❾** to display the Video submenu.

Figure 24

The **Aspect Ratio** setting selects the TV aspect ratio: conventional screen shape (4:3) or widescreen (16:9), according to your TV.

• 4:3 Letterbox: Choose this setting if

the DVD280 is connected to a conventional (4:3) TV set and you would prefer to see movies without any parts being cut off. You will see the entire frame of the movie, and DVDs recorded with normal 4:3 format will fill the entire screen. But movies in widescreen will occupy a smaller portion of the screen, with black bars at the top and bottom of the screen.

• 4:3 PanScan: Choose this setting if the DVD280 is connected to a conventional (4:3) TV set and you want widescreen movies to fill the entire screen. Note that this setting is effective only with a few widescreen DVDs recorded with the Pan and Scan mode. With those movies, you won't see parts of the picture (particularly the right and left edges). Most discs produced in a widescreen format can't be cropped in this fashion, which means the black bars will appear at the top and bottom of the screen (letterbox format). Some widescreen DVDs, particularly anamorphic types (with full vertical-line resolution; see section "16:9" below), may be shown with original width but spread vertically. With these discs, the letterbox format must be selected. This setting is useful only with a few DVDs; with all others, the letterbox format fits best.

• 16:9 Widescreen: Choose this setting if your DVD player is connected to a widescreen TV, or to a conventional (4:3) TV changeable to widescreen (16:9) mode.

With this setup, discs recorded with 4:3 aspect ratio will appear as a boxed image in the center of a 16:9 widescreen TV, with black bars to the left and right of the image (not with 4:3 TVs changeable to 16:9 mode). True widescreen (anamorphic) DVDs (i.e., those shown spread vertically when the DVD280 is set to "16:9" and your TV is set to "4:3") will be shown optimally with full vertical resolution. With some 4:3 TVs set to 16:9 format, discs with 4:3 format may be played compressed vertically. With those discs, the TV must be set to 4:3 format.

If you are using a 16:9 video display, then select that setting. If your display is in the 4:3 format, then you should choose either the 4:3 Letterbox setting if you wish to preserve all of the information available

in widescreen programs, or the 4:3 PanScan setting if you prefer not to see black bars on-screen, at the expense of losing some portions of the picture during some programs (see Figure 25).

Figure 25

Set the correct **TV Standard** for your television and region. The DVD280 defaults to the PAL video format. If you will be watching NTSC DVDs, select the "NTSC" option. If you are using a multistandard television or video display, select the "Auto" option for the best picture quality (see Figure 26).

Figure 26

The **Scan Type** setting allows you to select between progressive and interlaced scanning, depending on the capabilities of your video display. Although progressive scanning provides a superior picture, it is only available using the **Component (Y/Pr/Pb) Video Outputs ❺**. You must also make certain that your video display is capable of displaying a progressive signal. If it is not, then you will not see any picture when this setting is configured as "Progressive". Select the "Progressive" option if you have a video display that is compatible with input sources of 480P or greater. Displays labeled as "HDTV Ready," including virtually all large-screen LCD and plasma displays, are compatible with progressive scan. The DVD280's component video outputs are set to progressive scan video output at the factory for optimal performance. If your video display is not capable of displaying progressive scan materials, you will need to

change this setting to "Interlaced". This setting does not affect the SCART connection (see Figure 27).

NOTE: If you have connected the DVD280 to a video display that is not capable of displaying progressive scan video using the **Component (Y/Pr/Pb) Video Outputs ❺**, and you have inadvertently changed the Scan Type setting to Progressive, you may reset the scan type to interlaced by pressing and holding the **Clear Button ⓱** for at least 5 seconds. The display will blink, indicating that the scan type has been reset to interlaced mode. Alternatively, you may connect either the **Composite ❻** or **S-Video Output ❹** to your TV so that you can see the on-screen menus and change this setting, which does not affect the composite or S-video signal.

Figure 27

The **Video Output** setting selects between the **SCART ❼** and **Component Video Outputs ❺**. If you have connected one of these outputs to your video display and the screen is blank, you will need to temporarily connect the **Composite ❻** or **S-Video Output ❹** to your TV in order to view the on-screen menus and change this setting (see Figure 28).

Figure 28

The **SCART Output** setting only affects the **SCART Out (TV) ❼** video output. If your TV or video display monitor is capable of accepting an RGB-type signal, select this setting for the best video performance. Otherwise, choose the Composite setting (see Figure 29).
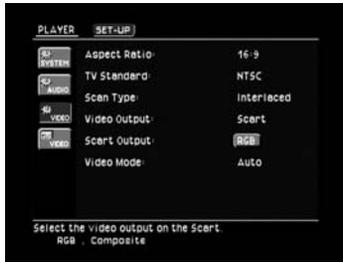
Figure 29

The **Video Mode** setting only affects the **Component Video Outputs ⑤**. This setting allows the user to compensate for errors in the disc authoring where proper maintenance of frame rate was not carried out in the film-to-video conversion process.

The DVD280's advanced adaptive interlacer will handle most of these types of problems, and it is therefore recommended that you select the Auto mode as a default. However, if you observe problems with vertical resolution on a specific disc, experiment by selecting the Movie mode for programs originally created on film, or the Video mode for programs originating on video (see Figure 30).

Figure 30

You are now almost finished configuring the DVD280. The only step left is to make any video adjustments to optimize the appearance of your display.

Video Adjustments Submenu

The Video Adjustments submenu enables you to adjust the color, tint, contrast, brightness and black level of the picture. The DVD280 includes a video test screen and the capability of adjusting the player's video output for optimal performance of your video display. However, it is strongly recommended that you first make the adjustments described on page 28 using the controls on your video display monitor or TV with the DVD280's video adjustments set at the midpoint.

Move the cursor to the Video Adjustments submenu icon on the left side of the screen, which shows a set of slide controls, and select it by pressing the **Enter Button ⑨**. (See Figure 31).

Figure 31

Unlike the other submenus, the video adjustments will appear only in the upper portion of your screen, and this submenu is not part of the main OSD menu system (see Figure 32).
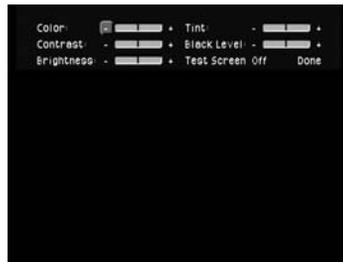

Figure 32

If the test screen is enabled, it will also appear. Select the Test Screen setting on the bottom row of the Video Adjustments Submenu to turn the DVD280's built-in video color-bar screen on or off. When the test screen is enabled, the Video Adjustments Submenu will disappear from the screen after 5 seconds, allowing you to make adjustments using the controls on your video display, or to clearly view adjustments made using the Video Adjustments Submenu. Press any key to return the submenu to the screen and continue making adjustments (see Figure 33). If you wish to access other portions of the on-screen menu system, you will need to press the **Setup Button ㉚** again.
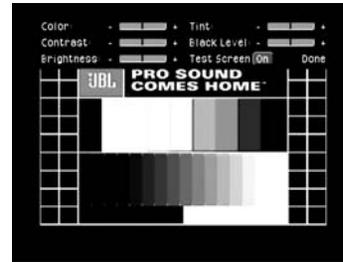

Figure 33

You may make video adjustments by selecting either the – or + symbol next to each parameter's temperature bar and clicking on it repeatedly. Stripes will appear to the left or right of the center stripe to reflect your changes (see Figure 34).
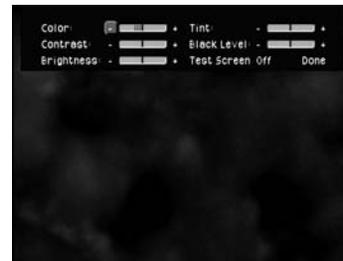

Figure 34

When adjusting the Black Level setting, note that the only adjustments available are to have the setting either at the midpoint, which provides a full "0 to 100" black level setting, or "full," which complies with standards for video with what is called "setup," or at a "7.5 to 100" black level setting.

Follow the procedure on page 28 to adjust your video display and maximize your enjoyment of the DVD280's high-performance video processing circuits.

DVD is one of the highest quality sources ever made available for in-home playback of prerecorded pictures and sound. In order to make certain that your home theater system is fully optimized to take advantage of DVD's superb picture quality, the DVD280 offers a built-in video test signal that makes it easy to calibrate your TV or video display for proper playback.

Test Screen

To utilize the built-in test screen, press the **Test Button** 🔢 at any time while the player is in Stop or Resume mode or access it from within the Video Adjustments submenu of the on-screen menu system (see Figure 31). When the button is pressed, the test screen will appear, allowing the following adjustments to be made:

• The proper color intensity setting on your TV.

• Proper color adjustments using the color bars, which should be (left to right) black, white, yellow, cyan (turquoise), green, magenta (purple), red, blue and black.

• The proper color transition, seen as sharp separation of the bars.

• The performance of the color filter in your TV (with "Video" signals); bar edges should show no vertical crawling dots.

With the gray scale and the black/white fields below the color bars, the brightness and contrast of your screen can be adjusted.
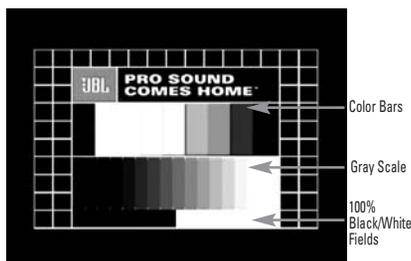

Figure 35

TV Picture Adjustment With Test Screen Brightness Adjustment
1. Turn down the color control on your TV until the color bars are visible in black and white.

2. Adjust the contrast to the lowest level where you still can see all bars within the gray scale in the test picture separately and clearly.

3. Adjust the brightness so that the bars in the gray scale are all visible. The bar furthest to the left has to be as black as possible rather than gray, but the next gradation must clearly be distinct from it. All the bars in the gray scale should be gradually and evenly changing from black to white, going from left to right.

Contrast Adjustment
1. Adjust the contrast on your TV until you see a bright white bar in the lower right corner of the screen and a deep-dark-black bar at the left. The optimal contrast setting will depend on your preference and the surrounding light in the TV room.

2. If the brightness of the white bar no longer increases when the contrast is turned up or the borders of the white letters in the logo at the top of the test screen bloom (over-light) into the black areas (drastically decreasing the sharpness of the type), the contrast has been turned up too much. Reduce the contrast until these effects disappear and the video still looks realistic.

3. If you are watching TV with customary surrounding daylight, adjust the contrast so that a normal video picture has about the same look as the surroundings in your room. That way the eye is relaxed when watching the TV picture. This contrast setting may be reduced when the surrounding light is dimmed, thereby usually improving the sharpness of a video significantly.

4. The gray scale in the middle line needs to have the same clear difference between each bar as before the contrast adjustment. If not, go back to "Brightness Adjustment" and repeat Step 3 and then "Contrast Adjustment," making only minor adjustments each time for optimization.

Color Adjustment
1. When the brightness and contrast are set optimally, turn up the color control to the level of your preference. Adjust to the level where the colors look strong but still natural, not overdone. If the color level is too high, depending on the TV, some of the bars will seem wider or the color intensity will not increase while the control is turned up. Then the color control must be reduced again. Ultimately, you also should test the color intensity with a video – e.g., pictures of natural faces, flowers, fruit and vegetables, and other common natural articles for an optimal setting of the color intensity.

2. If your TV has a Tint option (this is available or effective only with NTSC signals, not with PAL), use the large white bar below the gray scale to tweak the warmth of the picture. Every viewer has a preference as to how the glow of the picture should be. Some prefer a little colder picture, some a warmer glow. The Tint function on your TV and the white bar can be used to control this. Adjust the Tint to the level at which you feel the white color has the tone you prefer.

Convergence and Edge Focus

The crosshatch pattern that surrounds the test screen may be used to evaluate edge focus and convergence in front- or rear-projection video displays. However, the controls used to adjust these parameters are often not user-accessible. In any event, these adjustments are extremely complex, and require proper training and experience to avoid worsening the situation. Therefore, it is recommended that if you are unable to improve the picture using the available controls, contact the video display manufacturer's authorized service representative for assistance.

When all desired setup and configuration entries have been made, scroll to the "Done" button at the bottom right of the Video Adjustment submenu and select it to return to the on-screen menu system. Then, press the **Setup Button** ㉚ to remove the menu displays from the screen. The features accessed using the Player Menu of the on-screen menu system will be described on pages 31–34. The unit will return to normal operation and you are ready to enjoy the finest in DVD or CD playback!

Loading Discs

To load discs in the DVD280, first turn the DVD280 on by pressing in the **Main Power On/Off Switch 1** and then pressing the **Power On Button 2 ➊**. The **Power Indicator 3** will turn red when the power is first applied by pressing in the **Main Power On/Off Switch 1**. It will turn orange when the **Power On Button** is pressed. Once the **Main Power On/Off Switch 1** is turned on, it is normally left in that position unless you wish to turn the unit completely off so that the remote control will not be able to turn the player on.

Next, press the **Eject Button 5 ➎** until the **Disc Drawer 4** opens.

Hold the disc by the edge, and gently place it into the **Disc Drawer 4**, making sure the disc is properly seated in the tray's insert. If the disc is not correctly centered, you may damage both the disc and the player when the drawer closes. When loading discs, please note the following:

• The DVD280 will play discs with the following logos, as well as most WMA and JPEG discs, but not Kodak Picture CDs. DO NOT attempt to play another type of disc.

• The DVD280 will play discs in the NTSC and PAL video formats.

• Playback capability for CD-RW, DVD-RW or DVD+RW discs will vary according to the quality of the disc. On some occasions, it is possible that these discs may not play on the DVD280. This does not indicate any problem with the DVD280.

• The DVD280 will only play discs that are coded for your region, as indicated on the rear panel **⓫**, or discs that are open to being played in all regions. Discs that contain any other Region Code will not play.

• Both 5-inch (12cm) and 3-inch (8cm) discs may be used.

• When loading CD audio discs, load the discs with the label side up.

• When loading DVD discs with printed labels, load them label side up.

• Some DVD discs are double-sided. The title information for these will be printed on the inner ring of the disc, very close to the center hole. The title for the side you wish to play should be facing up.

Once a disc is properly loaded, press the **Eject Button 5 ➎** to close the disc drawer. After the drawer closes, you will see a brief indication of READING in both the **Main Information Display ⓭** and in the upper right corner of the on-screen display to alert you to the fact that the unit is determining the type of disc (DVD, CD, VCD, SVCD, JPEG, WMA or MP3) and is reading the data for track, chapter, title and other information about the disc.

Once the disc's data has been read, the type of disc will be displayed by the **Disc-Type Indicator Ⓐ** and the disc will automatically begin playing. The disc's track timing information and other relevant data will appear in the information display. For CD discs only, the Player Menu of the OSD system will automatically appear to provide disc and track information, and to enable you to program the order in which the tracks will be played. The Player Menu may be accessed during playback of DVDs by pressing the **Setup Button ㉚** and highlighting it using the **▲/▼/◀/▶ Navigation Buttons 6 8**.

While a DVD is playing, you may access the Status Bar by pressing the **Status Button ㉘** to view information on the current title and chapter, to change the current title or chapter, or to view time elapsed or remaining for a title or chapter (see Figure 36).
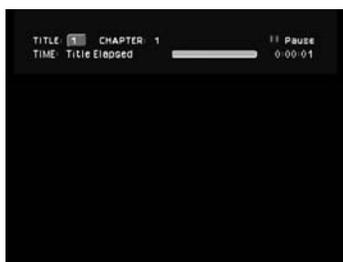
Figure 36

In addition, during DVD playback only, the right corner of the Status Bar will automatically display the current play mode in response to any changes,

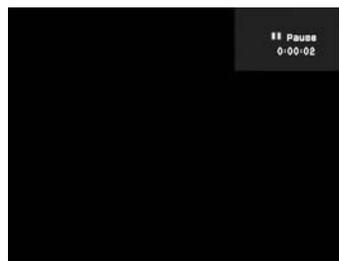such as pausing or resuming play (see Figure 37).

Figure 37

This mini Status Bar will also display messages to indicate that the **Disc Drawer 4** is opening or closing, and when the DVD280 is reading a new disc. The display will disappear after two seconds. The play mode will not be displayed during CD playback (see Figures 38, 39 and 40).

Figure 38

Figure 39

Figure 40

Basic playback with the DVD280 involves functions similar to those you may be familiar with for conventional CD players or changers:

• Turn the DVD280 on by first pressing in the **Main Power On/Off Switch** **1** and then pressing the **Power On Button 2 ❶**.

• If a disc is already in the drawer when the unit is turned on, it will begin playing. If the disc was stopped using the Resume function, you will be prompted to select whether to resume playback from the point at which it was stopped, or to play the disc from the beginning. If the disc was stopped by pressing the **Stop Button 8 ⓮** twice, the disc will play from its beginning.

• After loading a disc, press the **Eject Button ❺ 5** to close the drawer and begin play.

Playback Features for DVD and CD Discs:

• To momentarily pause playback and freeze the current picture frame on a DVD, press the **Pause Button 7 ❿**. To resume playback after pressing the Pause button, press the **Play Button 6 ⓬**.

• To move forward or backward through the tracks on a CD or the chapters on a DVD, press the **Skip Previous/Next Buttons 9 ❿ ⓫ ㉗**.

• To move forward or backward through the DVD or CD disc being played at fast speed, press the **Search/Slow Forward/Reverse Buttons ⓭ ㉖**. Once one of these buttons is pressed, the fast search will continue until the **Play Button 6 ⓬** is pressed. Note that the fast-play speeds are different for CD discs and DVDs.

For DVD playback, there are four fast-play speeds. Each press of the **Search/Slow Forward/Reverse Buttons ⓭ ㉖** will cycle to the next speed in the following order: 2x, 16x, 64x, 200x.

Note that there will be no audio playback during fast-forward or reverse-play of DVD discs. This is normal for DVD, as A/V receivers and surround processors cannot process the digital audio streams during fast-play modes; audio will

be heard during fast-play of conventional CDs.

For CD, VCD and SVCD playback, there are two fast-play speeds. Each press of the **Search/Slow Forward/Reverse Buttons ⓭ ㉖** will cycle to the next speed in the following order: 4x, 32x.

NOTE: Fast-Search is not available when MP3 or WMA discs are playing.

• When playing a DVD disc, you may move forward or backward through the program being played in one of four slow-motion speeds by first pressing the **Pause Button ❿**, and then pressing the **Search/Slow Forward/Reverse Buttons ㉒ ㉔** on the remote. Each press of the buttons will move to the next speed in the following order: 1/2x, 1/4x, 1/8x, 1/16x.

Note that there is no audio playback during slow-forward or -reverse play of DVD discs. This is normal for DVD, as A/V receivers and surround processors cannot process the digital audio streams during slow modes. Slow-play is not available for CD, MP3 or WMA discs. For VCD and SVCD discs, there are two forward slow-play speeds: 1/2x and 1/4x.

• To advance frame-by-frame forward or reverse while a DVD is playing, first press the **Pause Button 7 ❿**, then press the **Skip/Step (Previous) 9 ⓫** or **Skip/Step (Next) ❿ ㉗** buttons repeatedly. Press the **Pause Button 7 ❿** again to resume normal play.

• When a camera icon appears on the screen, and the **Angle Indicator 1** flashes, this is your indication that there is multiple-angle information on the disc being played. To change the angle, press the **Angle Button ㉓** repeatedly until the desired angle view appears. An on-screen banner message will appear to indicate the angle view in use.

To illuminate the buttons on the remote control so that they may be seen in low-light conditions, press the **Light Button ⓴**.

Using a DVD's Menu

One of the unique features of the DVD system is that it offers a producer the opportunity to include a wide range of features on a disc, including multiple-language tracks; subtitles in a variety of languages; special information such as movie trailers and cast information; as well as other customized information. In addition, producers may divide a movie or program into chapters that allow for quick access to specific parts of the program. These chapters may be accompanied by thumbnail pictures of a scene from the specific chapter to help you select the desired spot on the disc.

When a disc is playing, press the **Disc Menu Button ㉙** to pause the playback and display the disc's menu. As there are no hard rules about style and content for DVD menus, the way they appear on the screen and the information they contain will vary from one disc to another. However, the following general rules apply to most menus:

• The first menu that appears is the Main Menu, and you may move through the options with the **Navigation ▲/▼/◄/► Buttons 6 8**, as the disc's programming allows. The option selected will typically be highlighted in a certain color or inside an outline box.

• To select a highlighted option, which may either play a portion of the disc or move to a submenu, press the **Enter Button 9** or **Play Button 6 ⓬**.

• On some discs, when you select the DVD menu during the playback of a movie, the disc will return to the point in the program at which the menu was selected by offering a "Play Movie" option. Press the **Enter Button 9** or **Play Button 6 ⓬** to resume play. However, not all discs offer this feature, and selecting the menu while playing a movie may mean that you will have to go back either to the beginning of the program or to the start of a chapter. This feature is out of the control of the DVD280, as it is set by the disc's internal programming.

Important Notes on DVD Playback

The DVD280 is capable of all the features and options covered by the DVD standards. However, it is up to the producer of a DVD disc to decide which of those features and functions are available on any given disc. For that reason, not all discs will function identically, and some discs will not have many of the features of the DVD system. For example, most current DVD discs do not take advantage of the multiple-angle feature. When you press a button and the player displays the "Feature Prohibited" icon (⊘), this is an indication that the disc has not been programmed for that feature.

In addition, it is common for the producers of DVD discs to block the use of certain functions during only some parts of a disc. For example, many discs prohibit the use of fast-play buttons or prohibit access to the Chapter Menu display during the playback of copyright notices, studio logos, movie credits or trailers. The appearance of the "Feature Prohibited" icon (⊘) or the inability of certain features to operate when the disc itself has prohibited them, does not indicate a problem with the DVD280, as these features are outside of the unit's control.

Zoom Feature

The DVD280's advanced digital video processing circuits include a Zoom feature that allows you to enlarge the image for closer examination of a particular part of the picture. Four steps of enlargement are available.

• To use the Zoom feature, press the **Zoom Button ㉒** while a disc is playing or paused. Each press of the button will increase the zoom-in effect. When you have zoomed through all four steps, the picture will return to normal size.

• When in any of the Zoom modes, you may use the **Navigation ▲/▼/◄/► Buttons ❻ ❽** to navigate around the frame. Some discs may require you to first pause playback.

• Some discs are created in a way that prevents the Zoom feature from operating. In addition, the Zoom feature will not operate on disc menus and may not operate on subtitles.

• The zoom function is also available for VCDs, SVCDs and JPEGs. However, for VCDs and SVCDs, only two steps of enlargement are available, 2x and 4x.

Playback Resume Feature

The DVD280 offers a "Resume" feature that is different from the conventional "STOP" function you may be used to on CD players. When the **Stop Button ❽ ⓮** is pressed once, the disc will stop and an on-screen RESUME indication will appear on the video screen. While the Resume feature is active, the disc's position is entered into the unit's memory so that when the **Play Button ❻ ⓬** is pressed to resume playback, the program will continue at the point where it was when the **Stop Button ❽ ⓮** was pressed.

To completely stop playback, press the **Stop Button ❽ ⓮** twice.

• The Resume function is not available for CDs or JPEGs.

• The Resume function will be effective after the unit has been placed in Standby mode for DVDs, MP3s and WMAs, but not for VCDs or SVCDs. The resume function will not be effective after the unit has been turned fully off using the **Main Power On/Off Switch ❶**.

Using the Player Menu

The DVD280 has an easy-to-use on-screen menu system that simplifies the task of programming playback of discs. Of course, the simplest method of playing discs is to use the transport controls on the front panel or remote control. However, many features that will enhance your enjoyment of your favorite movies and music are only accessible using the on-screen menu system.

Access the Player Menu by pressing the **Setup Button ㉚**. The menu system is navigated using the **Navigation ▲/▼/◄/► Buttons ❻ ❽**, and selections are made using the **Enter Button ❾**. When an icon or word on-screen is highlighted with the appearance of a button, you may select it by pressing the **Enter Button ❾**. The item will then appear to be a depressed button. Usually an instruction will appear on the bottom of the screen, directing you to take further action or to choose from a list of options, one of which will be highlighted. Throughout this manual, when you are asked to "scroll" in a certain direction, or move the cursor, it means to use the **Navigation ▲/▼/◄/► Buttons ❻ ❽** to move the visible cursor or to cause a new icon to appear highlighted on-screen. When you are asked to select an icon, it means to use the **Navigation ▲/▼/◄/► Buttons ❻ ❽** until the icon is highlighted, and then to press the **Enter Button ❾**.

The Player Menu
Move the cursor to the Player icon in the upper left corner of the screen, but do not press the **Enter Button ❾**. The Player Menu will appear on-screen (see Figure 41).

Figure 41

You may begin playback of the disc by pressing the **Enter Button ❾**, or you may program the order in which the materials on the disc will be played,

which may be done only while the disc is in the Stop mode. You may also begin play of a specific Title, Chapter or Track by moving the cursor to the list of disc materials in the lower portion of the screen and pressing the **Enter Button** ❾ to select a Title, and then to select a Chapter or Track, for play.

Normally the **Info** icon on the left side of the screen will be active, and information about the disc will appear. If you wish to remove this information from the screen, select the Info icon, and press the **Enter Button** ❾ to deactivate it, and only the list of groups or titles will appear (see Figure 42). Press the Info icon again to return the disc information to the screen.

Figure 42

The **Disc** line will identify the type of disc (DVD, CD, JPEG, MP3, WMA, MP3/JPEG, WMA/JPEG, MP3/WMA/JPEG).

The **Audio** line displays the currently selected audio track, preceded by an ordinal number. The audio track may refer to a different language, a different surround format (such as Dolby Digital or DTS), an artist's commentary, or some other soundtrack the artist makes available to accompany the visual presentation. If the player is in Stop mode, the word "None" will appear here, as no audio is currently selected (see Figure 43).

Figure 43

NOTE: If the disc is paused, the Audio information will not display correctly.

To begin playback, either press the **Play Button** ❻⓬ or move the cur-

sor to the Player icon in the upper left corner of the screen and press the **Enter Button** ❾. If your disc contains more than one audio track (for example, if your disc contains a Dolby Digital 5.1 track and a DTS track), the ordinal number representing each option will be displayed at the bottom of the screen. Press the **Enter Button** ❾ so that the cursor will move to these options. As you scroll left or right through the options, a description will appear above the currently highlighted number. Select the number corresponding to the audio track you wish to hear (see Figure 44).

Figure 44

The **Playlist** setting enables you to determine whether the materials will be played in the order in which they appear on the disc, or in an order that you program (see Programmed Play on page 43). This function generally is more useful for music discs than movies (see Figure 45).

Figure 45

The **Repeat** setting allows you, to repeat a title, chapter or track, folder, or the entire disc (except DVDs), depending on the type of disc (DVD, CD, MP3, WMA, JPEG or VCD). For MP3, WMA and JPEG discs, you may repeat a folder. However, if the disc contains both MP3 and JPEG files, the repeat folder option is not available. Repeat folder is available for WMA/JPEG discs, as you may only access either the audio or image files at one time, but not both together. For all disc types, if you have programmed a playlist (see page 43), the Repeat All setting will repeat the playlist, which

may or may not include all of the tracks on the disc. (See Figure 46.)

Figure 46

The **Random** setting is not available for DVDs (see Figure 47).

Figure 47

The **Subtitle** setting allows you to select a subtitle language if one is available on the disc. This setting will apply only to that disc (see Figure 48).

Figure 48

Disc Navigation Using the Player Menu

The Player Menu makes it easy to select the specific item on the disc that you'd like to play. Move the cursor to the list of materials on the disc (see Figure 49).

Figure 49

If it is a DVD-Video disc, you will see a list of titles by number, each title

representing one program, such as a movie or "Making Of" featurette. It's possible for a disc to have only one title. Titles are often divided further into chapters, which makes it easier to locate a specific section of a lengthy movie.

For a CD, a list of Tracks will be displayed, each containing a different song.

You may view the Chapters in a Title on a DVD by selecting the Title and pressing the **Enter Button** ❾ (see Figure 50).

Figure 50

Select any Chapter and press the **Enter Button** ❾ again to begin play of that item (see Figure 51).

Figure 51

Where the disc contains a long list of tracks or chapters, you may move the cursor to the Page Up and Down icons in the lower left corner of your screen. Each time you press the **Enter Button** ❾ while either the up or down arrow is selected, the list of tracks or chapters will jump one page (see Figures 52 and 53).

Figure 52

Figure 53

Normally, when you insert a disc and open the Player Menu, the Info and Program icons on the left side of the screen will both be active, displaying information about the disc and the current playback settings at the top of the screen (Info icon), and the order of the tracks on the right side opposite each track (Program icon). If you wish to hide the information at the top of the screen, including the disc type, program settings and time display, move the cursor to the Info icon on the left side of the screen. Press the **Enter Button** ❾ to hide the information and display only the track/chapter list. Press it again to restore the information to the screen (see Figures 54 and 55).

Figure 54

Figure 55

If you wish to hide the playlist column on the right side of the screen (which displays the order in which the tracks will be played), move the cursor to the Program icon on the left side of the screen. Press the **Enter Button** ❾ to hide the playlist and display only the track/chapter list. Press it again to restore the information to the screen (see Figures 56 and 57).

Figure 56

Figure 57

You may hide both the disc information and the playlist, displaying only the list of tracks or chapters, by deactivating both the Info and Program icons on the left side of the screen (see Figure 58).

Figure 58

The DVD280 will recognize data CDs containing files in the MP3, WMA and JPEG formats. A disc may contain files in more than one format. When an MP3, WMA or JPEG disc is loaded, the names of the files on the disc will appear. If the files have been organized into directories, you may select the current folder and press the **Enter Button** ❾ to close it, and move up one level in the directory to view other folders and subfolders. Select a folder and press the **Enter Button** ❾ to expand it. Select a file and press the **Enter Button** ❾ to play it if it's an audio file, or display it if it's a JPEG file (see Figures 59 and 60).

Figure 59

Figure 60

Slide Shows

The DVD280 offers the capability of viewing a "slide show" of images while playing audio simultaneously. You may have noticed that if you insert a disc containing JPEG files, the DVD280 will automatically display the images in order, each image remaining on-screen for about 15 seconds. If you insert a disc that contains both JPEG images and MP3 audio files, the DVD280 will play the audio files while displaying the images. However, if the disc contains WMA and JPEG files, you will only be able to access either the audio or the image files at any one time, using the method described below.

You may control this function using the Player Menu. Press the **Setup Button ⑳** and select the Player Menu. You will observe two icons on the lower left, Audio and Picture, both active (see Figure 61).

Figure 61

To play the audio files without viewing the images, stop play and move the cursor to the Picture icon and deactivate it (see Figure 62). To view the images without hearing the audio

files, move the cursor to the Audio icon and deactivate it (see Figure 63). One icon will always be active.

Figure 62

Figure 63

You may change the amount of time each image remains on-screen at the Picture line in the upper portion of the screen. The Picture line is only visible when the Picture icon has been activated. You may select an on-screen time of 15, 30 or 45 seconds, or you may have the image remain on-screen for the duration the audio track is playing (see Figure 64).

Figure 64

The setting will remain in effect until you stop play of the disc. You may also scroll forward and backward through the image files on the disc using the **Pic+ ㉕** and **Pic– ㉔** buttons on the remote.

NOTE: When creating discs containing MP3, WMA and/or JPEG files, it is important to create the disc in one session. You may be able to accomplish this either by adding all desired files to the disc at one sitting, or by making sure not to finalize the disc before adding additional files. If you don't finalize the disc, the DVD280 will

not be able to recognize or play any of the files until the disc is finalized; but if you do finalize the disc and add additional files later, although the files may be recognized by your PC, the DVD280 may not recognize the files added in the later session.

Using the Status Bar Display

The Status Bar provides an abbreviated snapshot of the status of the disc currently playing. It appears across the top of the screen, unlike the Player Menu, which takes up the entire screen. The Status Bar displays the current title, the chapter or track, the play mode and the time elapsed or remaining. To see the Status Bar Display, press the **Status Button ㉘** on the remote while a disc is playing. Use the **Navigation ▲/▼/◄/► Buttons ⑥ ⑧** to move through the different features (see Figure 65).
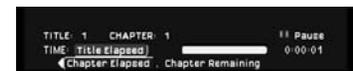

Figure 65

NOTE: When a CD, WMA or MP3 disc is playing, the Status Bar will not be available. Instead, the Player Menu of the on-screen menu system will appear on-screen. (See page 31 for more information on using the Player Menu.)

For DVD-Video discs, the current Title and Chapter numbers will appear (see Figure 66).

Figure 66

Move the cursor to highlight any of these numbers and press the **Enter Button ⑨** to select a different track, title or chapter (see Figure 67).

Figure 67

For JPEG discs, the File Index number and File Name will be displayed; however, you will not be able to change them (see Figure 68).

Figure 68

To navigate a JPEG disc, you must use the Player Menu of the on-screen menu system (see page 34).

The Time section of the Status Bar display offers a choice of time display modes relating to the disc being played. When this section is high-lighted, press the **Navigation ▲/▼ Buttons 6 8** to select from the following choices:

For DVD-Video discs:

• **Title-Elapsed:** Indicates the time elapsed in the current title.

• **Title-Remain:** Indicates the time remaining in the current title.

• **Chapter Elapsed:** Indicates the time elapsed in the current chapter. In cases where a title has only one chapter, this will be the same as the time elapsed in the current title.

• **Chapter Remaining:** Indicates the time remaining in the current chap-ter. In cases where a title has only one chapter, this will be the same as the time remaining in the current title.

For CDs, VCDs and SVCDs (Available Only on Player Menu for CDs):

• **Disc Elapsed:** Indicates the time elapsed of the current disc.

• **Disc Remain:** Indicates the time remaining on the current disc.

• **Track Elapsed:** Indicates the time elapsed of the current track, which may be the same as the disc elapsed time if there is only one track on the disc.

• **Track Remain:** Indicates the time remaining of the current track, which may be the same as the disc remaining time if there is only one track on the disc.

For MP3 and WMA Discs:

• **File Time:** Indicates the elapsed time of the current file. No other time information is available.

No time information is available for JPEG discs, as you may set the time the image remains on-screen yourself using the Player Menu, as described on page 34.

A "temperature bar" will be displayed between the description of the time being displayed and the actual numerical display to indicate approxi-mately what percentage of the title has been played thus far.

A useful feature of the DVD280 is its capability of starting playback from a specific time marker on the disc. To use this feature, first press the **Status Button 28** while the disc is in play. Use the **Navigation ▲/▼/◄/► Buttons 6 8** to highlight the time display in the lower right corner of the Status Bar. Using the **Numeric Keys 19**, enter the one-digit hour, two-digit minute and two-digit second from which you wish to begin playback. Once you have entered all digits, play will begin from that point on the disc.

The time search function is not avail-able for MP3, WMA or JPEG discs. For DVDs, VCDs, SVCDs and CDs, the time search function will automatic-ally change the time display to Title Elapsed for DVDs, or Track Elapsed for the other disc types mentioned. Time search is also available on CDs while Repeat or Programmed play is active. For VCDs and SVCDs, it is available while Repeat play is active. For DVDs, it is only available during standard play.

Remember that the invalid symbol (∅) appears on the screen when you press a button that doesn't have any function. To make the Status Bar dis-appear from the screen, press the **Status Button 28** or the **Clear Button 17** on the remote control.

While a DVD is playing, special Status Bars for certain functions may appear when you press the corre-sponding buttons on the remote. The purpose of these Status Bars is to avoid using the entire screen, enabling you to continue enjoying the video presentation while making adjustments. These Status Bars will remain on-screen until you select the "Done" button at the right side of the bar, unless you have set the Status Bar time-out in the Setup Menu (see page 23).

Press the **Audio Button 4** to select from the available audio tracks on the disc (see Figure 69). Note that the description of the audio track will appear when you have highlighted its number.

Figure 69

Press the **Subtitle Button 31** to turn the subtitles on or off, or to select a subtitle language (see Figure 70).

Figure 70

Pressing either the **Repeat Button 2** or the **Random Button 32** will cause the Repeat/Random Status Bar to appear on-screen (see Figure 71). Scroll or continue to press the appro-priate button to select from among the available repeat modes for the disc, or to play the tracks or chapters in random order.

Figure 71

Press the **Playlist Button 3** to choose to play the tracks or chapters in disc order or programmed order (see Figure 72). See page 43 for more information on programming playlists.

Figure 72

You can only access the various Audio Track, Subtitle, Angle and Repeat Displays while playing a disc. Also, each feature is only available if the disc was created with that partic-ular feature (you won't be able to change the subtitle language unless the disc was created with subtitles).

Changing the Audio Track

DVDs may contain a variety of audio tracks, including foreign languages, special commentaries, descriptive video for the sight-impaired, and vari-ous digital formats. In normal play, the unit will always look for the default setting for the audio track, but you may change the audio track at any time using the **Audio Button 4** on the remote control.

While playing a disc, press the **Audio Button ❹** on the remote control once to see the Audio Display with the current audio language and format (see Figure 73). Scroll to select other languages and/or audio formats.

Figure 73

NOTES:

• The audio feature only works if the disc was created with multiple audio tracks.

• Some DVDs do not not allow direct selection of audio during playback. Instead, you must use the audio setup section of the disc menu.

• When you choose an audio language with the **Audio Button ❹** on the remote control, you override the audio language setting in the DVD280's Audio submenu only temporarily.

• The Audio feature may also be accessed using the Player Menu (see page 32).

Changing the Subtitle Language

DVDs may contain a variety of subtitles. In normal play, the unit will always look for the default setting for the subtitle language, but you may temporarily change that language at any time using the **Subtitle Button ㉛** on the remote.

While playing a disc, press the **Subtitle Button ㉛** on the remote control once to see the Subtitle display with the current subtitle language (see Figure 74). Scroll to select other subtitle languages.

Figure 74

NOTE: The subtitle feature only works if the disc was created with subtitles. The subtitle feature may also be accessed using the Player Menu (see page 32).

Changing the Camera Angle

A special feature of the DVD format is its capability of showing more than one view, or camera angle, of the same scene. This feature enables you to become the director, selecting the view of a scene that you wish. However, this feature does not appear on many discs and, when it does appear, it will typically be for only certain scenes and not for the entire disc's program.

To see whether a disc contains multiple angles, check the disc's cover or jacket. When the DVD´s title or chapter played currently does contain scenes with multiple angles, the multi-angle symbol in the upper right corner of the front-panel display will flash. The multi-angle feature is only available when this symbol is flashing.

When the multi-angle symbol flashes, you can press the **Angle Button ㉓** on the remote control. The Angle Display will appear with the camera angle currently being viewed and the total number of angles on the disc (see Figure 75).

Press the **Angle Button ㉓** again to change the camera angle. The number of angles available may differ from one disc to another.

Figure 75

NOTE: When viewing JPEG images, the **Angle Button ㉓** may be used to rotate the image. Make sure to stop playback of any audio files on the disc. With the image on-screen, press the **Angle Button ㉓** once to display the current orientation of the image, usually +0. Press the **Angle Button ㉓** again within one second to rotate the image clockwise 90 degrees. The new orientation of +90 will be displayed. Each additional press of the **Angle Button ㉓** will continue to rotate the image clockwise by 90 degrees.

Repeat Play

The DVD280 offers several repeat functions that allow you to take advantage of the capacity of the unit for unattended playback:

• **Repeat 1 Chapter:** Repeats the DVD chapter currently being played until the disc is manually stopped; in the front-panel display, **REPEAT ◉** and **1 ◉** will light up, and REPEAT 1 will appear in the Status Bar.

• **Repeat Title:** For DVD discs only, this mode repeats the title currently being played until the disc is manually stopped; in the front-panel display, **REPEAT ◉** and **ALL ◉** will light up, and REPEAT ALL will appear in the Status Bar.

• **Repeat Program:** Repeats the current playlist if Programmed Order has been selected at the Playlist setting.

• **Repeat 1 Track:** For VCDs, SVCDs, CDs, MP3s and WMAs, repeats the track or file currently being played until the disc is manually stopped. The **Repeat ◉** and **1 ◉** indicators will light in the front-panel display, and REPEAT 1 will appear in the Status Bar.

• **Repeat Disc:** For VCDs, SVCDs, CDs, MP3s, WMAs, JPEGs and discs containing both MP3s and JPEGs, repeats the entire disc until play is manually stopped. The **Repeat ◉** and **All ◉** indicators will light in the front-panel display, and REPEAT ALL will appear in the Status Bar.

• **Repeat Folder:** For MP3s, WMAs and JPEGs, repeats all tracks within the current folder until play is manually stopped. The **Repeat ◉** indicator will light in the front-panel display, and REPEAT FOLDER will appear in the Status Bar.

• **Repeat A-B:** Repeats any selected portion of the disc until the disc is manually stopped (see page 37 for more information).

To select any Repeat mode (other than Repeat A-B):

1. While a disc is playing, press the **Repeat Button** ❷ on the remote; the Repeat Status Bar appears (see Figure 76).

Figure 76

2. Access the Repeat modes by selecting the current setting, scrolling to the desired selection as appropriate for the type of disc you have loaded, and pressing the **Enter Button** ❾ (see Figure 77).

Figure 77

3. To make the menu disappear from the screen, press the **Clear Button** ❼ or the **Status Bar** ❷❽ on the remote or wait a few seconds, if the Status Bar Time Out Setting was turned off in the Setup Menu (see page 23).

• To stop any Repeat Play function and continue normal play, press the **Repeat Button** ❷ until the Repeat menu appears in the on-screen display. Select the OFF setting.

• Repeat Play may be stopped by pressing the **Stop Button** ❽ ❶❹ twice.

• The Repeat modes may also be accessed using the Player Menu (see page 32).

A-B Repeat Play

The Repeat A-B function allows you to select any portion of a DVD and have it repeat continually until the unit is manually stopped.

To initiate a Repeat A-B playback sequence, follow these steps while a disc is playing:

1. Press the **A-B Repeat Button** ❷❶ on the remote when you want to choose a scene as the beginning point; REPEAT A appears in the upper right corner of the Status Bar (see Figure 78).

Figure 78

2. Press the **A-B Button** ❷❶ again to choose a scene as the end point. Repeat A-B has been set, and the A-B section will be played continuously (see Figure 79).

Figure 79

3. Press the **A-B Repeat Button** ❷❶ on the remote again to cancel Repeat A-B mode.

4. To make the Status Bar disappear from the screen, press the **Clear Button** ❼ on the remote or wait a few seconds, if the Status Bar Time Out Setting was turned off in the Setup Menu (see page 23).

NOTE: The A-B Repeat range may cover several titles or chapters as long as the DVD´s control system does not force the unit to return to any DVD menu in between.

Information Menus

The DVD280 has the capability to give you an on-screen overview about various information on the current disc, such as ID3 tags, or important player settings, by pressing the **Info Button** ❼ or using the Player Menu, without having to stop the playback mode.

While the disc is playing, press the icon on the bottom of the left side of the Player Menu screen for detailed information on the disc playing (see Figure 80), including the disc type, disc name if one was provided when it was recorded, aspect ratio settings for the disc and player, video standard for the disc and player, scan type (interlaced vs. progressive) for the disc and player, audio resolution, audio format, and the video and audio bit rates.

Figure 80

Press the icon again to remove the information display from the screen.

When playing audio CDs, your DVD player has the same features as a CD player, including track skip, repeat play and programmed playback. These functions may be programmed using the Player Menu, as described on pages 31–34. You may also access these functions directly using the remote control.

Selecting a Track

1. During Stop, Resume or Play mode, enter the track number directly with the **Numeric Keys** ⓳ on the remote. The track selected will be played at once.

2. Use the Player Menu to navigate the disc, as described on pages 31–34. When a track is highlighted, you may press the **Enter Button** ❾ to play it (see Figure 81).

Figure 81

• In all modes, any track can be selected directly by entering its number with the **Numeric Keys** ⓳ on the remote.

• You can skip through tracks forward or backward by pressing the **Skip/ Step Next/Prev. Buttons** (track skip ▶▶I/I◀◀) ❾ ❿ ⓫ ㉗.

• In Stop mode, the front display will show the number of tracks recorded on a CD (below the **Track Indicator** Ⓓ) and the total time on the disc.

Selecting Time Display

The time display in the front-panel display or in the on-screen menu system can be selected and adjusted:

In the Player Menu, select the Time setting in the upper portion of the display. Press the **Enter Button** ❾ to be prompted at the bottom of the screen to select from the Track Elapsed Time, Disc Elapsed time, Track Remaining Time or Disc Remaining Time. Scroll from left to right until the desired option is highlighted, then press the **Enter Button** ❾ to select it. The selected format will be displayed to the right of the Time setting in the on-screen display, and the time displayed on the DVD280's front panel will also appear in the selected format (see Figure 82).

Figure 82

You may set an exact time at which you wish a track or disc to play. The disc must be playing. Highlight the time display to the right of the Time setting, and press the **Enter Button** ❾ (see Figure 83). Use the **Numeric Keys** ⓳ to enter the time at which you wish play to begin. Do not press any other keys; the DVD280 will automatically play from the specified time.

Figure 83

Repeat Play

With CDs, the DVD280 offers three Repeat functions that allow you to take advantage of the capacity of the unit for unattended playback:

• **Repeat All (Disc):** Plays the complete disc repeatedly from start to finish until the disc is manually stopped. When the Playlist setting has been set to Programmed Order, Repeat All will play the complete programmed playlist, which may or may not include all tracks on the disc, depending on how you have programmed it. See page 43 for more information on programming playlists.

• **Repeat Track:** Repeats the CD track currently being played until the disc is manually stopped.

• **Repeat A-B:** Repeats any selected portion of the disc until the disc is manually stopped.

Open the Player Menu by pressing the **Setup Button** ㉚ to display the on-screen menus, and then using the **Navigation ◀/▶ Button** ❽ to highlight the Player Menu, select the Repeat setting. When the current setting is highlighted, the options of Repeat Off, Repeat Track and Repeat All (Disc) will appear at the bottom of the screen (see Figure 84). Press the **Enter Button** ❾ to move the cursor to these options, and scroll left or right until the desired repeat mode is highlighted. Press the **Enter Button** ❾ again to select it. To cancel the repeat mode, select the current setting so that the repeat menu appears at the bottom of the screen, and then select the Repeat Off option.

Figure 84

You may also repeat a track or disc by pressing the **Repeat Button** ❷ on the remote. If you do so while the on-screen menu system is visible, the

first press of the **Repeat Button ❷** will highlight the Repeat setting at the top of the Player Menu. The next press of the **Repeat Button ❷** will change the setting from "Off" to "1," meaning that the current track will be repeated. The next press will change the setting from "1" to "All," meaning that the entire disc will be repeated. Press again to return the setting to Repeat Off. Each additional button press will cycle through these settings.

In addition, the **Repeat Indicators [O]** in the **Front-Panel Information Display [13]** will light to indicate the same settings. If the on-screen menu system is not visible, then only the **Repeat Indicators [O]** will change in response to presses of the **Repeat Button ❷**.

A-B Repeat Play
The Repeat A-B function allows you to select any portion of a CD and have it repeat continually until the unit is manually stopped.

To initiate a Repeat A-B playback sequence, follow these steps while a disc is playing:

1. While a disc is playing, press the **A-B Repeat Button ㉑** on the remote when you want to choose a passage as the beginning point. Repeat A– will appear on the Repeat line of the Player menu, and **REPEAT A– [M]** will be indicated in the front-panel display (see Figure 85).

Figure 85

2. Press the **A-B Repeat Button ㉑** again to choose the end of the passage. **REPEAT A-B** will appear in the Repeat line of the Player menu, and the **Repeat A-B Indicator [M]** will light in the front-panel display. Repeat A-B is set and the A-B section will be played continually (see Figure 86).

Figure 86

3. Press the **A-B Repeat Button ㉑** on the remote again so that the **REPEAT A-B Indicators [M]** disappear and **OFF** appears in the Repeat line of the Player menu to cancel the Repeat A-B mode and to play in normal mode.

NOTE: The A-B Repeat range may cover several tracks on the CD.

Random Play

The Random Play function will play all of the tracks on a CD in a random order, as selected by the DVD280. Once the DVD280 has played all of the tracks on the disc once, it will stop.

Open the Player menu by pressing the **Setup Button ㉚** to display the on-screen menus, and then using the **Navigation ◄/► Button ❽** to highlight the Player menu, select the Random setting. When the current setting is highlighted, the options of Random Off and Random On will appear at the bottom of the screen (see Figure 87). Press the **Enter Button ❾** to move the cursor to these options, and scroll left or right until the desired mode is highlighted. Press the **Enter Button ❾** again to select it. To cancel the random mode, select the current setting so that the random menu appears at the bottom of the screen, and then select the Random Off option.

Figure 87

You may also select the random mode by pressing the **Random Button ㉜** on the remote. If you do so while the on-screen menu system is visible, the

first press of the **Random Button ㉜** will highlight the Random setting at the top of the Player menu. The next press of the **Random Button ㉜** will change the setting from "Off" to "On," meaning that the remaining tracks on the disc will be played in random order. The next press will change the setting back to Random Off. Each additional button press will cycle through these settings.

Also, the **Random Indicator [P]** in the **Front-Panel Information Display [13]** will light any time the Random setting is on. If the on-screen menu system is not visible, then only the **Random Indicator [P]** will change in response to presses of the **Random Button ㉜**.

Video Off Feature

During CD playback, some listeners may prefer to turn off the DVD280's video circuitry. Although the video section is electrically isolated from the audio section, some users may prefer to turn the video displays off during audio playback to prevent any possibility of interference between audio and video. You may also wish to turn the video display off if you find the menu system distracting or unnecessary during CD playback.

To turn the video displays off while a CD is playing, simply press the **Video Off Button [15]**. Press the button again to restore the video output. The **V-Off Indicator [K]** will light to remind you that the video displays have been turned off. Note that the video output will automatically be restored each time the DVD280 is turned on.

The DVD280 is among the few DVD players that are able to play discs recorded with MP3 or WMA files. This means that you may enjoy the latest music using discs created in your computer through the high-quality audio components in your home theater system. As the way that MP3 and WMA files are recorded on discs differs from the way conventional CD audio discs are structured, MP3/WMA playback is slightly different from that of standard CDs.

MP3 and WMA discs may contain 200 tracks or even more. To get the best overview about all tracks on the disc and their names and to select or program them comfortably, use the on-screen display rather than the front-panel display. The front-panel display will only show the number and the elapsed time of the track being played for WMA files.

The supported bit rate for WMA files is between 16k bits and 192k bits. The supported bit rate for MP3 files is between 32k bits and 320k bits.

MP3 or WMA Disc Playback
After the disc is loaded and the tray closed, the DVD280 will read the disc's table of contents (TOC). At the same time, a listing of all the directories on the disc (if the disc was made with several directories) and of all tracks within the root directory on the disc will appear in the Player menu similar to Figure 88 below. When any of the tracks is selected and played, the elapsed time of the track currently playing will be displayed on top.

Figure 88

To select a directory (if any), press the ▲/▼ **Navigation Buttons** ❻ until the desired directory name is highlighted, then press the **Enter Button** ❾.

To select a track, press the ▲/▼ **Navigation Buttons** ❻ until the desired track name is highlighted. If the list of tracks is longer than will fit on the screen, press the ◀ **Navigation Button** ❽ to move the cursor to the "Page Up" or "Page Down" box on the left and press the **Enter Button** ❾ to jump through a list of the track numbers forward or backward through the list. Then press the ▶ **Navigation Button** ❽ to return to the list (see Figure 89).

Figure 89

To start play of the track selected on the list, press the **Enter Button** ❾ or **Play Button** ❻❶❷.

During MP3/WMA playback, some of the standard CD/DVD playback controls operate in their normal fashion:

• You may skip forward to the next track on the disc by pressing the **Skip/Next Button** ❿㉗.

• You may skip back to the current or previous track on the disc by pressing the **Skip/Prev Button** ❾⓫ once or twice.

• Press the **Pause Button** ❼❿ to momentarily stop playback. Press the **Play Button** ❻❶❷ to resume play. Press the **Stop Button** ❽⓮ twice to enter stop mode.

• Fast-search and slow-play are not available during MP3/WMA playback.

• You may play an MP3 or WMA disc in random mode like a normal CD (see page 39). If the Player Menu is not visible on-screen, press the **Setup Button** ㉚ to display it. Scroll down to the Random setting, and select it by pressing the **Enter Button** ❾. Scroll left or right to select the Random On or Off setting, and press the **Enter Button** ❾ again. You may also access the Random function while an MP3 or WMA disc is playing by pressing the **Random Button** ㉜ (see Figure 90).

Figure 90

• The Repeat function may be accessed during playback of an MP3 or WMA disc either by displaying the Player Menu on-screen by pressing the **Setup Button** ㉚ and scrolling down to the Repeat setting, or by pressing the **Repeat Button** ❷ on the remote. Either press the **Enter Button** ❾ and scroll left or right, or repeatedly press the **Repeat Button** ❷ to scroll through the options of Repeat 1 (repeat one file), Repeat All (repeat all files) or Repeat Folder (repeat all files within the current folder). The next press will turn the repeat function off (see Figure 91). Note that although the **Repeat Indicator** ⓞ will light as long as any repeat function is enabled, the front panel will not indicate which repeat mode has been selected.

Figure 91

All other buttons (including the numeric buttons) will have no function with MP3 playback, except the **Playlist Button ❸** and **Clear Button ⓱**, which are needed for programmed playback (see below).

NOTES ON MP3 AND WMA PLAYBACK

• During playback, the front-panel display and the time indicator on the screen above the list will show the elapsed time of the track being played. Other time display options are not available with MP3/WMA playback.

• The DVD280 is only compatible with standard MP3- and WMA-encoded discs. Other compressed audio formats used for Internet audio downloads will not play on the DVD280.

• Due to the differences in various versions of the MP3 and WMA formats, and the many differences between the CD-R machines used to record discs on a computer, it is possible that some discs may not play on the DVD280 even though they will work on a computer. This is normal and does not indicate a fault with the unit.

• When a multisession disc with both standard CD audio and MP3 or WMA content is in use, the DVD280 will play only the CD audio sections of the disc. Track numbers will be visible in the display, but the files will not be decoded.

• If a disc containing MP3, WMA and/or JPEG files is created in more than one session, the DVD280 may not recognize files added during the later sessions, especially if the disc was finalized after the first session.

• When a disc with multiple directories is playing, only tracks from one directory can be displayed and played at a time. Select the desired directory and press the **Play Button ❻ ⓬** to start the first track. To see and play tracks from other directories, first you must select that directory, then select the track and press the **Play Button ❻ ⓬**.

• Only stereo audio playback is available for MP3 and WMA discs (see Figure 92).

Figure 92

Programmed Playback With MP3 or WMA Discs

The DVD280 is capable of creating playlists of the files on a properly recorded disc. To create a playback list for MP3 or WMA titles, follow the same steps as for programming a playlist for any other format disc, as described on page 43.

Information Menus

The information menus described on page 37 are also available when an MP3 or WMA disc is loaded into the DVD280 by pressing the **Info Button ❼**. During MP3 playback, the following information will be visible on the Information menu: disc type, track elapsed time, track number in disc's order, and track number in programmed order. If the information was entered at the time the disc was recorded, or if it contains the ID3 tag, Version 1 (ID3v1), the following information will also appear: title, artist name, album name, year of release, comment line and genre. The file name and bit-rate will also be displayed (see Figure 93).

Figure 93

JPEG Playback

As mentioned earlier in this manual, the DVD280 is one of the few available DVD players that is capable of recognizing JPEG still-image files and displaying them. When a disc containing JPEG files is loaded, the **JPEG Disc-Type Indicator Ⓐ** will light in the **Main Information Display ⓭**. The disc will immediately begin displaying the images on the disc in order.

Use the Player Menu, as described on page 34, to set the duration each image remains on-screen, to program the order of display, and to simultaneously play any MP3 audio files also present on the disc. WMA audio files may not be played simultaneously with the display of the JPEG files.

When viewing JPEG images, the **Angle Button ㉓** may be used to rotate the image. Make sure to stop playback of any audio files on the disc. With the image on-screen, press the **Angle Button ㉓** once to display the current orientation of the image, usually +0. Press the **Angle Button ㉓** again within one second to rotate the image clockwise 90 degrees. The new orientation of +90 will be displayed. Each additional press of the **Angle Button ㉓** will continue to rotate the image clockwise by 90 degrees.

The Zoom function is available while viewing JPEG images. See page 31 for more information.

VCD, a format that predates DVD, is based on a different compression format than DVD and a recording method that is similar to CD. Although the DVD has, for the most part, replaced VCD as a format, the DVD280 offers VCD playback so that you may play your existing library of VCD discs.

There are two versions of the VCD format: an early version which is simply called "VCD" and a later version with Playback Control which is called "Version 2.0" or "PBC." The DVD280 is compatible with both forms of VCD, although playback will vary according to which version is used and the specific way in which the disc was created.

Even though VCD discs provide video, because the format is based on CD technology, the playback functions for a VCD disc are similar to CD. To play a VCD disc, place it in the DVD280 as you would do with any other CD or DVD disc. The unit takes a few seconds to read the disc's contents. The disc type "VCD" will appear only in the Player Menu, which may be accessed by pressing the **Setup Button** ❸⓿. The **PBC Indicator** **L** will light only if the disc has playback control. Otherwise, there will be no indication on the front panel of the disc type. In addition, the **Info Button** ❼ has no effect when a VCD is playing, as there is no access to the Information Menus. The only available information will appear in the Player Menu.

Keep in mind that the exact level of functionality for any VCD will vary widely and it is ultimately determined by the way the disc was created, not by the DVD280, particularly if the disc has been created under VCD Version 2.0 with Playback Control (see "Playback Control").

When playing VCD discs, most standard DVD/CD playback controls are used, including Play, Stop, Pause, Resume, Track Skip Forward and Reverse, Slow Forward, Step Forward and Fast Forward or Reverse Search. The functions Slow Reverse and Step Reverse are not available with VCDs.

You may select the track number and change it to skip to another track. You may also change the time display by selecting from disc elapsed time, track elapsed time, disc remaining time or track remaining time. You may also begin play from a specific time marker by selecting the numeric time display and entering the desired starting point using the **Numeric Keys** ⓵⓽.

You may repeat a track, disc or A-B selection, following the same instructions as for other CDs (see pages 38–39). You may also play the tracks on a disc in random order. However, it is not possible to program playlists for VCDs and SVCDs.

Using the Status Bar for VCD Playback
When playing VCD discs, it is possible to access the disc's features using the Status Bar. Press the **Status Button** ❷❽ to see the Status Bar. Note, however, that when the PBC is on, some features may be not available with that VCD (see Figure 94).

Figure 94

Use of functions when the PBC is on will vary according to the disc type. Note that if the disc was created with Playback Control (PBC) [see below] it is not possible to change track numbers directly.

Depending on the disc's functionality, some VCD discs allow the time display to be changed, even with PBC.

Playback Control
VCD discs made under the Revision 2.0 specification will usually offer PBC playback control.

The **PBC Indicator** **N** in the front display will turn on automatically with any VCD, when the disc is played.

PBC can be turned off or on from the Setup Menu (see page 24). With PBC, you can select titles and navigate the disc as with DVDs. However, the access to some functions may be prohibited by the PBC playback control; in that case, the prohibit icon will appear on-screen.

When the VCD is made without PBC, the disc can be controlled the same as an audio CD, but direct track access by entering a number is not possible without opening the Status Bar. However, you may select a track using the Player Menu, as with any other disc.

With PBC, many discs include chapter selection menus that are similar to those found on DVDs. However, on VCD discs the disc menu (if any) is accessed and controlled differently than on DVDs.

• Play will start with the first track (which may be an intro), then leading to the VCD menu (if any) automatically.

• NEXT (Skip Forward) will skip to the VCD menu from the intro (Track 1) directly.

• Once the menu options appear on the screen, make your selection by pressing the **Numeric Keys** ⓵⓽ that correspond to your desired choice. The desired selection will begin playing automatically.

• Direct number entry without any VCD menu shown on-screen has no effect – even when the Status Banner is on.

• When PBC is on, the **Disc Menu Button** ❷⓽ will have the same function as with DVDs, making the player return to the latest disc menu. When PBC is off, pressing the **Disc Menu Button** ❷⓽ will turn the PBC on and the disc will be played from the beginning.

SVCD Playback

SVCDs can be played and controlled in the same way as described with VCDs above.

When SVCDs are loaded, the VCD Disc Type will appear in the Player Menu.

• Due to the differences in various versions of the SVCD format, and the many differences between the CD-R machines used to record SVCD discs on a computer, it is possible that some SVCD discs may not play on the DVD280 even though they will work on a computer. This is normal and does not indicate a fault with the unit.

Zoom Function

The Zoom function is available for VCDs by pressing the **Zoom Button** ❷❷. Repeatedly pressing this button will cycle through the possible settings of 1x, 2x and 4x zoom.

Programmed Play

Programmed play allows you to select any track, title or chapter from a disc, for playback in a specific order. This type of programming is particularly useful for parties or other situations where you desire continuous playback of specific selections for a long period of time.

Programming play lists is an intuitive process that is facilitated by the DVD280's sophisticated on-screen menu system. The procedure is the same for all types of discs (except VCDs and SVCDs), although some of the screens may appear slightly different.

To program a disc for playback, follow these steps:

1. Load the desired disc, but do not start playback. Stop playback if the disc begins to play automatically.

2. Display the Player Menu on-screen by pressing the **Setup Button** ❸⓿ to display the on-screen menus, and then using the **Navigation ◀/▶ Buttons** ❽ to highlight the Player Menu. You may deactivate the Info icon to make it easier to view long lists of tracks, chapters or files. Make sure that the Program icon is activated (see Figure 95).

Figure 95

3. Move the cursor to the Disc List/Prg. List button on the right side of the screen. The button is at the top of a list of numbers next to each track. These numbers indicate the order in which the track will be played. As indicated on the bottom of the screen (see Figure 96), by pressing the Disc List/Prg. List button, you have the option of displaying the disc order of play, or a programmed order. To program a new playlist, select the programmed order of play, then clear the list, displaying a dot in place of a number. If you only wish to change the order of a few tracks without programming the entire list, leave the dis-

play in program order, and scroll down to those tracks you wish to reprogram or skip.

Figure 96

4. Scroll to the dot (or number, if you didn't clear the program as described in Step 3) next to the first track whose order you wish to program, and you will be prompted at the bottom of the screen to add it to the end of the playlist, enter a number to directly program it, order in the playlist, or clear the programming for that track (see Figure 97).

Figure 97

It is simplest to scroll to each track and select the Add function in the order you desire, but you may prefer to directly enter the numerical order in which the tracks should be played.

Press the **Enter Button** ❾, type the number using the **Numeric Keys** ❶❾ that reflects the order in which you wish the track to be played, then press the **Enter Button** ❾ again. Note that you must press these keys quickly, before the prompt times out. If it does time out, the current track order will be highlighted, and you may press the buttons again. The DVD280 will update the track list order to fill in any holes, so that if you enter "999" for a disc containing only 6 tracks, the DVD280 will automatically place the track sixth in the programmed order.

5. The programmed number will appear in the playlist in place of the dot or the original number. Scroll down to the next track you wish to program.

6. Scroll past any track you wish to skip, leaving a dot to indicate that it has no programmed play order.

7. Make sure to instruct the DVD280 to play the disc in the programmed order, by activating the Info icon on the left side of the screen and selecting the playback order setting (see Figure 98).

Figure 98

Alternatively, press the **Playlist Button** ❸ at any time to display the Playlist Status Bar. Select the current setting (Disc Order or Programmed Order) by pressing the **Enter Button** ❾, and scroll to the desired choice. (See Figure 72.)

Figure 72

8. You may begin playback by moving the cursor to the word "Player" in the upper left corner of the screen and pressing the **Enter Button** ❾.

During programmed play the track number shown in the front-panel display will reflect its order on the disc. However, the **Prog Indicator** 🆀 will light to remind you that the disc's tracks are playing in programmed order.

For discs containing both JPEG files and audio files, you may independently program the order in which pictures will appear on-screen, and the order in which audio files will be played. Select the Picture or Audio icon on the left side of the screen and follow steps 1 through 6 above to program a playlist.

The Random function may be used when a playlist is active, and the disc's tracks will be played in random order (neither disc order nor programmed order). The Repeat function may also be used when a programmed playlist is active.

Cancel Program Play

To cancel Program Play, follow one of these steps:

1. When you open the **Disc Drawer** 𝟜, the program will be deleted, and the Playlist line in the Player Menu will return to the default of playing all tracks in the disc's order.

2. Stop play and select the Program icon at the top of the list of tracks. Press the icon, and you will be prompted to either clear the program or show the disc order of the tracks (see Figure 96). Select "Clear Program" to cancel programmed play.

3. You may stop play and move the cursor to the Playlist line of the Player Menu. Press enter and select the disc's order of play to stop programmed play without deleting the program from memory. You may continue programmed play later by changing the Playlist line back to the programmed order, as long as you have not deleted the program in some other fashion (see Figure 98).

DVD LANGUAGE CODES

The availability of specific languages for the main audio track or subtitles is dependent on the choices made by a disc's producer. You should always consult the disc's jacket for information on languages for any disc. In the case of some languages, you may be required to enter a code from the list below to access that language. See pages 22–23 for more information on entering language codes.

Language	Code	Language	Code	Language	Code
Abkhazian	6566	Icelandic	7383	Sangho	8371
Afar	6565	Indonesian	7378	Sanskrit	8365
Afrikaans	6570	Interlingua	7365	Scots Gaelic	7168
Albanian	8381	Interlingue	7369	Serbian	8382
Ameharic	6577	Iunpiak	7375	Servo-Groatian	8372
Arabic	6582	Irish	7165	Sesotho	8384
Armenian	7289	Italian	7384	Setswana	8478
Assamese	6583	Japanese	7465	Shona	8378
Aymara	6588	Javanese	7487	Sindhi	8368
Azerbaijani	6590	Kannada	7578	Singhalese	8373
Bashkir	6665	Kashmiri	7583	Siswati	8383
Basque	6985	Kazakh	7575	Slovak	8375
Bengali; Bangla	6678	Kinyarwanda	8287	Slovenian	8376
Bhutani	6890	Kirghiz	7589	Somali	8379
Bihari	6672	Kirundi	8278	Spanish	6983
Bislama	6673	Korean	7579	Sundanese	8385
Breton	6682	Kurdish	7585	Swahili	8387
Bulgarian	6671	Laothian	7679	Swedish	8386
Burmese	7789	Latin	7665	Tagalog	8476
Byelorussian	6669	Latvian, Lettish	7686	Tajik	8471
Cambodian	7577	Lingala	7678	Tamil	8465
Catalan	6765	Lithuanian	7684	Tatar	8484
Chinese	9072	Macedonian	7775	Telugu	8469
Corsican	6779	Malagsy	7771	Thai	8472
Croatian	7282	Malay	7783	Tibetan	6679
Czech	6783	Malayalam	7776	Tigrinya	8473
Danish	6865	Maltese	7784	Tonga	8479
Dutch	7876	Maori	7773	Tsonga	8483
English	6978	Marathi	7782	Turkish	8482
Esperanto	6979	Moldavian	7779	Turkmen	8475
Estonian	6984	Mongolian	7778	Twi	8487
Faroese	7079	Naru	7865	Ukrainian	8575
Fiji	7074	Nepali	7869	Urdu	8582
Finnish	7073	Norwegian	7879	Uzbek	8590
French	7082	Occitan	7967	Vietnamese	8673
Frisian	7089	Oriya	7982	Volapuk	8679
Galician	7176	Oromo (Afan)	7977	Welsh	6789
Georgian	7565	Panjabi	8065	Wolof	8779
German	6869	Pashto, Pushto	8083	Xhosa	8872
Greek	6976	Persian	7065	Yiddish	7473
Greenlandic	7576	Polish	8076	Yoruba	8979
Guarani	7178	Portuguese	8084	Zulu	9085
Gujarati	7185	Quechua	8185		
Hausa	7265	Rhaero-Romance	8277		
Hebrew	7387	Romanian	8279		
Hindi	7273	Russian	8285		
Hungarian	7285	Samoan	8377		

TROUBLESHOOTING GUIDE

TROUBLESHOOTING GUIDE

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Unit does not turn on	• **Main Power Switch** 1 turned off • No AC power • Standby pressed within 4 seconds after Main Power Switch	• Press in **Main Power Switch** 1. • Check AC power plug and make certain any switched outlet is turned on. • Press the Standby Switch at least 4 seconds after the unit has been turned on by the Main Power Switch 1.
Disc does not play	• Disc loaded improperly • Incorrect disc type • Invalid Region Code • Rating is above parental preset	• Load disc label-side up; align the disc with the guides and place it in its proper position. • Check to see that disc is CD, CD-R, CD-RW, VCD, SVCD, MP3, WMA, DVD-R, DVD-RW, DVD+R, DVD+RW (standard conforming) or DVD-Video; other types will not play. • Make sure disc's Region Code matches code shown on rear panel of unit. • Enter password to override or change rating settings (see page 23).
No picture	• Intermittent connections • Wrong input • Progressive Scan output selected • Video Off feature active	• Check all video connections. • Check input selection of TV or receiver. • Use Progressive Scan mode only with compatible TV. • Press **Video Off Button** 15 to reactivate video circuitry (see page 39).
No sound	• Intermittent connections • Incorrect digital audio selection • DVD disc is in fast or slow mode • Surround receiver not compatible with 96kHz PCM audio	• Check all audio connections. • Check digital audio settings. • There is no audio playback on DVD discs during fast or slow modes. • Use analog audio outputs.
Picture is distorted or jumps during fast-forward or reverse play	• MPEG-2 decoding	• It is a normal artifact of DVD playback for pictures to jump or show some distortion during rapid play.
Some remote buttons do not operate during DVD play; prohibited symbol ⃠ appears (see below)	• Function not permitted at this time	• With most DVDs, some functions are not permitted at certain times (e.g., Track Skip) or at all (e.g., direct audio track selection).
The OSD menu is in a foreign language	• Incorrect OSD language	• Change OSD language selection (see page 22).
The ⃠ symbol appears	• Requested function not available at this time	• Certain functions may be disabled by the DVD itself during passages of a disc.
Picture is displayed in the wrong aspect ratio	• Incorrect match of aspect ratio settings to disc	• Change aspect ratio settings (see page 25).
Remote control inoperative	• Weak batteries • Sensor is blocked	• Change both batteries. • Clear path to sensor or use optional outboard remote sensor.
Disc will not copy to VCR	• Copy protection	• Many DVDs are encoded with copy protection to prevent copying to VCR.

DVD280 TECHNICAL SPECIFICATIONS

Applicable Disc:	Disc formats: 5-inch (12cm) or 3-inch (8cm) DVD-Video, standard conforming DVD-R, DVD+R, DVD-RW, DVD+RW, VCD, SVCD, CD, CD-R, MP3, WMA, JPEG or CD-RW discs
	Region code: DVD Movie disc with Code shown on rear panel of unit only
	DVD-Layers: Single Side/Single Layer, Single Side/Dual Layer, Dual Side/Dual Layer
	Audio formats: Linear PCM, MPEG, MLP/CPPM Dolby Digital or DTS Audio Discs
Video Signal System:	PAL and NTSC
Composite Video Output:	1V p-p/75 ohms, sync negative polarity
S-Video Output:	Y/Luminance: 1V p-p/75 ohms, sync negative polarity
	C/Chrominance: 0.286V p-p
Component Video Output:	Y: 1V p-p/75 ohms, sync negative polarity
	Pr: 0.7V p-p/75 ohms
	Pb: 0.7V p-p/75 ohms
Analog Audio Output:	2V rms max
Frequency Response:	DVD (Linear PCM): 2Hz – 22kHz +0/–0.5dB (48kHz sampling)
	2Hz – 44kHz +0/–0.5dB (96kHz sampling)
	CD: 2Hz – 20kHz +0/–0.5dB
Signal/Noise Ratio (SNR):	113dB (A-weighted)
Dynamic Range:	DVD: 100dB (18-bit)/105dB (20-bit)
	CD/DVD: 96dB (16-bit)
THD/1kHz:	DVD/CD: 0.0025%
Wow & Flutter:	Below Measurable Limits
AC Power:	110 – 240V/50 – 60Hz
Power Consumption:	12 Watts (On)/20 Watts (Max)
Dimensions (W x H x D):	440mm x 89mm x 298mm (17-5/16" x 3-1/2" x 11-3/4")
Weight:	3.1kg (6.9 lb)

Depth measurement includes knobs and connectors.

Height measurement includes feet and chassis.

All specifications subject to change without notice.

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